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ABSTRACT

The primary objective of this investigation was to determine what attitudinal and knowledge factors contributed toward minority high school students not choosing nursing as a profession in higher numbers than they currently do. A total of 2,057 American Indian, Chicano, Black, and Caucasian high school seniors were surveyed at three geographically disparate sites to assess their attitudes toward and concepts of nursing education, and to relate these factors to certain demographic variables. The major findings from each of these content areas are briefly summarized in Chapter I. Chapter II covers the implications for a recruitment and guidance program. Chapter III includes background and review of literature. Chapter IV describes the survey design. Chapter V identifies the method. Chapter VI gives the results. Chapter VII discusses the relationship between current findings and previous research. Approximately half of the document consists of data tables. The appendix includes a sample questionnaire. (HD)

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HIGH SCHOOL SENIORS' ATTITUDES & CONCEPTS OF NURSING AS A PROFESSION

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FOREWORD

Increasing the representation of minority groups in nursing is a major concern of the Division of Nursing. While a variety of recruitment programs carried out over the past decade have increased the number of minority group members in nursing, much remains to be done.

Continuous evaluation of recruitment programs has shown the need for more definitive information concerning those factors which cause students to choose or reject careers in nursing. Considerable information has been obtained on students who had already chosen a nursing career, but less attention has been given to assessing the attitudes and information about nursing among the general high school student population. Those studies which had addressed this group were generally limited in scope, and confined to one or another selected group or to a single region of the country.

In 1972, the Division of Nursing contracted with the Center for Health Systems Studies, American Institutes for Research, to conduct a study of high school students to learn their attitudes toward and concepts of nursing as a career. The study was broadened to include both blacks and whites and was extended to Chicanos and American Indians, to both rural and urban settings, and to settings in the South and West, as well as the Northeast.

The study was unique in that the objective was to ascertain and compare a wide range of knowledge and attitudes of nursing held by a large heterogeneous sample of high school students. The results reported herein confirm some previous findings, support some previous assumptions, provide new findings not previously reported, and refute some conjectures.

The information and insights gained in the study have been used in preparation of recruitment materials and activities which are now being tested in active recruitment and guidance programs underway in the areas where the study was carried out.

Jessie M. Scott

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Assistant Surgeon General
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ACKNOWLEDGMENTS

The study reported in this document represents the initial phase of a project directed at recruiting more high school students from Afro-American, American Indian, and Mexican American extraction into baccalaureate nursing careers. Although the study was initiated when the Division of Nursing was part of the National Institutes of Health, it was completed subsequent to the Division's reorganization into the Health Resources Administration.

As Principal Investigator, Dr. Melvin H. Rudov assumed responsibility for the overall direction of this project. Dr. Rudov, Director of the Center for Health Systems Studies and half-time consultant to the Office of the Assistant Secretary for Health, has for a number of years been responsible for the direction of large-scale health research and evaluation projects both external to and within the Federal Government.

Under the initial direction of Dr. Karen F. Trocki, a social psychologist who has specialized in conducting survey research projects, the survey was designed and the instruments were developed and pilot-tested. Dr. Maurice T. Wilson, also a social psychologist, succeeded Dr. Trocki as Project Director. He was responsible for conducting the survey and analyzing the results. Although inputs were made at different stages of the study, the collective contributions of the three authors to the final report are inseparable. The final report of the project was published as: Wilson, M. T., Rudov, M. H., and Trocki, K. F., *High School Seniors' Attitudes Towards and Knowledge of Nursing as a Profession;* Pittsburgh: American Institutes for Research, January 1975. That report contains all of the data resulting from the project. This report represents a condensation of that report and one in which the less salient findings have been omitted.

The authors acknowledge the assistance given them in the early conception of the program by a Dean's Panel composed of the deans of the three baccalaureate programs in the City of Pittsburgh. The nurses who served on that panel were:

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In addition, Ms. Betty Hukill, R.N., a member of the Center's staff whose graduate education has been in counseling education, helped to design, coordinate and conduct the study of the tasks that hospital duty nurses found themselves occupied with. That study was used as base data with which to compare the high school students' responses to the nursing tasks items.

The authors further acknowledge the help and guidance of Mr. Arthur Testoff, who served as the Bureau's Project Officer from the initiation of the project through the completion of the survey. Ms. Helen Hudson and later Ms. Dolores LeHoty, R.N., succeeded Mr. Testoff as Project Officer and gave help and guidance during the writing of the final report.

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I. SUMMARY

The primary objective of this investigation was to determine what attitudinal and knowledge factors contributed toward minoity students not choosing nursing as a profession in higher numbers than they currently do. A total of 2,057 American Indian, Chicano, black, and white high school seniors were surveyed at three geographically disparate sites (Pittsburgh, Pennsylvania; Tallahassee, Florida; and several places throughout the State of Arizona) to assess their attitudes toward and concepts of nursing as a profession, their academic preparation for nursing education, as well as relate these factors to certain demographic variables. The major findings from each of these content areas are briefly summarized in the following paragraphs.

Attitudes Toward Nursing Careers

Job Desirability

Eleven semantic differential subscales were used to measure the desirability of certain aspects of nursing careers. These scales indicated that students' attitudes toward nursing were highly positive in terms of financial reward, personal reward, occupational status, work enjoyment, challenge, and advancement opportunities, neutral in terms of the degree of self-supervision, and negative in terms of work hours and work difficulty. Students also thought that a nursing career required a considerable amount of education and was very female-oriented.

Attitudes Toward Nursing Tasks

The pleasantness ratings students gave to the tasks they thought the hospital duty nurse (HDN) performed most frequently ranged between moderately pleasant to slightly unpleasant. When using students' pleasantness ratings to evaluate the tasks that a group of hospital duty nurses said they actually did most frequently, a demonstrable improvement in student pleasantness ratings obtained. Although there were some interesting and substantial differences between regional and racial subgroups, generally it was found that differences between males and females accounted for most of the differential attitudes toward nursing tasks.

Reasons for Rejecting RN Careers

When asked to state the reasons for not desiring nursing careers, students gave several categories of responses; females, however, most frequently did not favor it because of "squeamishness" (i.e., they could not stand the sight of blood, did not like hospital environments, or could not bear to be around sick and dying people). Males most frequently did not desire nursing as a career because they felt it was a female-related career.

Knowledge of the Nursing Profession

As has already been pointed out, students misperceived the roles of hospital duty nurses (HDNs) as defined by the tasks they thought nurses did. The most consistent finding across all respondent subgroups was that students identically and incorrectly stereotyped the role of the HDN. Almost without exception, students thought that HDNs most frequently performed relatively low skill level health care tasks that are usually delegated to LPNs (e.g., taking temperatures and blood pressures). Students were also somewhat uninformed as to the high school course requirements (i.e., algebra, biology, chemistry) and certain noncourse requirements (i.e., college boards, high school transcripts, prenursing examination, etc.) needed for admission to schools of nursing. They were, for example, unable to distinguish an actual prenursing examination from a fictional test.

Academic Preparation

For the most part, students were found to be academically unprepared to pursue nursing education. Less than half of all Chicano, black, and Indian students said they had taken chemistry, although most had taken biology. It was not obvious from these findings, however, that white students are substantially better prepared academically to pursue nursing education. Regardless of race, students generally seemed to avoid chemistry and algebra.

Demographic Background Information

One of several explanations advanced for why it is that minority and disadvantaged youths fail to enter nursing careers in larger numbers has to do with the lack of opportunities these youths have for identifying with health professions through appropriate role models. It has been suggested by some that such an identification can greatly enhance one's evaluation of nursing and nursing careers. Although this investigation did not focus primarily on this question, we did find several trends among the data supportive of that hypothesis, and thus worth mentioning. Among some subgroups (particularly white respondents), exposure to nurses through volunteer work in hospitals or personal acquaintance with an RN resulted in higher and more positive ratings of nurses than was the case among students who had no such exposure.

Integration of the Results

Trying to tie the foregoing into a meaningful whole, one has to start out with the observation that nursing careers are held in very high esteem. On a comparative basis, it was rated on most scales as having attributes very close to that of a physician career, which is one of the most highly esteemed professions in our culture. That it was also rated near but below their own desired occupation is also evidence for this conclusion, but further indicates that many students have already made career choices that are more desirable to them. On the other hand, particularly among our targeted groups, students should be willing to consider nursing careers in fairly large numbers. There are some suggestions that are made in the implications for program participation section that try to concatenate these findings into a programmatic effort to increase the number of students entering nursing from these targeted groups.

II. IMPLICATIONS FOR A RECRUITMENT AND GUIDANCE PROGRAM

There were many findings of the study reported herein which indicated that a program of recruitment and guidance directed at the targeted groups would be quite successful. Of course, one of the best of these indications was the respondents' generally positive response to a direct question concerning their interest in a nursing career.

The study did more, however, than just provide us with support for the probable success of such a program. It also provided us with some ideas for both the format and content of a successful program. A review of these ideas can furnish us with some design objectives for a successful recruitment and guidance program. These objective are:

1. Provide the students with better knowledge of nursing as a profession.

   It was quite obvious that although students think well of nurses, they really do not know what nurses do. It is also clear that if they did know what nurses do, they may be more attracted to such careers. Their responses to the supervisory and administrative tasks, for example, were quite positive.

   In addition, their stereotyping of nurses leads them to believe some negative things about nursing careers that are not necessarily true. For example, they do not think that nurses have good working hours. No one would argue that the 3 o'clock to 11 o'clock or 11 o'clock to 7 o'clock shifts would be popular among all people, but there are many good "9 to 5" positions that are not hospital-based which are available to nurses, and the number of hospital-based positions that have similar daylight hours is increasing (e.g., PSRO Review Coordinators, nurse health educators, patient grievance coordinators, etc.). At the same time, they may be able to learn that some of these positions are not female-related, do not require constant exposure to morbidity, and maybe they can even become acquainted with the concept that their dislike of morbidity can dissipate with exposure to it, and with knowledge and training in caring for the sick. Finally, some of the students do not think that nursing is as financially rewarding as other occupational choices and they may need to learn of the new and expanding nursing roles that are more highly remunerated than those with which they may be familiar.

2. Provide the students with better academic guidance and counseling.

   If members of our targeted audience wish to become nursing students, they must become acquainted with and motivated toward achieving certain requirements. First, they must *learn* that math requirements must be met and that transcripts, college boards, and references are important. Then, they must be *motivated* to fulfill requirements that they seem to know about but have not elected to fulfill (e.g., chemistry). We can also probably go beyond our data with some safety. If the students didn't have sufficient knowledge about the points raised above, it is also probably true that they lack information about the how, when, and where of applications to colleges and nursing programs. It also is apparent that they have made sufficient trips to their counselor's office to conclude that the remedy will not come from the established guidance program. The school counselors don't have the information either. The recruitment and guideance program either has to provide that information to the counselors and motivate them to use it, provide it directly to the students, or do both.

3. Provide a basis for exposure to role models.

   It is not a new idea, but our study has helped to make it a well substantiated fact: Students who know nurses and other health professionals on a personal basis have more positive attitudes toward nursing than those who have no such contact. If members of the targeted group do not opt for nursing careers because they have had no exposure to nurse models who are members of their minority group, then they are not likely in turn to become nurses and give exposure to still other members of their group. And thus, we have no water with which to prime the pump. The program, then, must be designed in such a fashion that close, personal relationships are fostered with nurses, and preferably with those who represent their minority group or a group with which they can identify.

In a way, the three program design objectives listed above (and no suggestion is made that they are all of the criteria that need to be considered) seem simple enough to grasp and probably easy to achieve agreement upon. It is naive, however, to believe that it is an easy task to develop a well-conceived program that embodies these objectives in an optimal fashion. It is also naive to believe that such a program can be superimposed on existing and diverse school programs, spread throughout the geographically disparate locales in our country where the many potential targeted students are located. Yet, that is the need. And that is the intent of the follow-on phases of this project.

III. BACKGROUND AND REVIEW OF THE LITERATURE

Two major problems face the Nation today to which the project was addressed. One deals with the quality of service provided by the health care delivery system. The second concerns the nature of our socioeconomic system which has produced a sector of our society that has become known as the "disadvantaged." Further discussion of these two problems will clarify their importance as two pressing national problems.

The quality of health care has increasingly come under attack from many different sectors. The claims are too manifold to list here; however, they include complaints that (a) the health insurance system allows for excessive fees and unnecessary procedures and hospitalizations; (b) hospital planning or the lack of it has resulted in a poor distribution of hospital beds with respect to the distribution of the population; and (c) an equally poor distribution of specialized facilities with respect to utilization rates exists. Whether one speaks of the facilities of the health care delivery system or of the economic system for the procurement of services, the problem of manpower always seems to overshadow all other health care-related problem areas.

The claims of manpower shortages range from there being inadequate numbers of personnel in the health professions to the claim that there is poor utilization of what seems to be sufficient numbers. It has been suggested by those who see personnel shortages as the major problem that we drastically increase the number of personnel being trained in the health professions. Those who see manpower utilization as the major problem propose the upgrading of nurses and certain paramedical personnel to practitioner status as the primary solution. Since the nursing profession represents the largest source of personnel with basic preparation in the health sciences, most specific proposals have included using nurses to fill the alleged gaps in the practitioner ranks.

As can be seen, no matter which analysis one sides with, the suggested remedy is the same: *train larger numbers of nurses to increase the quality of health care delivery in this country*. The contrary, however, appears to be occurring. The per capita demand for nursing services has been increasing at a steady rate, while the supply has steadily decreased. In 1956, for example, 6.4 percent of school graduates were admitted to schools of nursing. By 1967, the proportion had dropped to 4.4 percent. Although that rate has since increased to approximately 4.9 percent, this level still falls short of projected needs. Clearly, a way must be found to attract more high school graduates to nursing, especially those professional nurses trained at the baccalaureate level.

Concurrently our country has faced an additional problem. The plight of racial and economically disadvantaged groups in our country represents a serious indictment of this Nation. Many have been denied or have been unable to take advantage of opportunities available to other, more privileged groups. During the 1960's and continuing into the 1970's the Federal Government took positive steps to create opportunities whereby minority and disadvantaged groups could fully utilize their talents to gain entry into many health fields not previously open to them.

A considerable body of literature has developed in recent years around the problems of minority and disadvantaged groups in nursing. These studies range from the prediction of probable success in nursing school (e.g., Burgess and Duffy, 1969; Mancott, 1969; Ewen and Kirkpatrick, 1967; etc.) to the examination of personality factors associated with success in nursing school (e.g., Smith, 1968; Mowbray *et al.*, 1967; Thurston, *et al.*, 1969; etc.). A review of this literature will help to place the present study in a proper perspective.

In recent years increasing attention has been given to the critical manpower shortage in the field of nursing. The major impetus for the concern originated when the report of the Surgeon General's Consultant Group on Nursing[1] was published by the U.S. Public Health Service in 1963 and stated that an adequate number of nurses was urgently needed to "reverse the progressive dilution of nursing services . . ." (p. 19). It was estimated that by 1970 the Nation would need approximately 850,000 professional nurses to provide services that were 'safe, therapeutically effective, and efficient" (p. 23). Upon presenting its findings, the Consultant Group recommended that a national investigation of nursing and nursing education be undertaken to determine the skills necessary for high quality patient care and ways to make nursing a more attractive career. Other recommendations made by this group included the expansion of recruitment efforts at the State and local levels and enlarging the recruitment pool to include minority and disadvantaged groups, men, and married and older women.

It was largely through the findings of the Surgeon General's Consultant Group that sincere efforts were initiated to actively increase minority and disadvantaged group membership in nursing. The following sections document those efforts as they appear in the literature. Four major topics are treated as they appeared in the literature: *recruitment, selection criteria, training,* and *special programs.*

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[1] See reference list, page 19.

Recruitment

Prior to the publication of the Surgeon General's report, the Committee on Careers, a branch of the National League for Nursing, had the major responsibility for recruitment of prospective nursing candidates. This Committee, cosponsored by the American Nurses' Association, the American Medical Association, and the American Hospital Association organized Future Nurses' Clubs in some 4,000 high schools across the country in 1961. For the most part, this Committee was ineffective in attracting appreciable numbers of minority group members to nursing, a fact which is underscored when one considers that in 1950 there were only 3,000 blacks enrolled in professional nursing schools (about 3.0 percent of the total enrollment), and in 1961 total black enrollments had *not* increased over the 3.0 percent mark of the total enrollment. In 1961 fewer than 40 percent of all professional nursing schools accepted male applicants, and of those that did, only 1,400 men, or slightly less than 1 percent of the total, were ever enrolled. Between 1960 and 1966 the number of blacks who graduated annually from professional schools of nursing (i.e., diploma, associate degree, baccalaureate) was 1,050, or 3.0 percent of the total enrollment; for men the percentage was 1.7, or about 604 total. (See U.S. Public Health Service, *Toward Quality in Nursing: Needs and Goals. Report of the Surgeon General's Consultant Group,* 1963).

Because of the lack of progress in minority recruitment, the Federal Government took some positive steps to correct that condition. In 1966, Title VIII of the Public Health Service Act was amended to allow for financial support for scholarship grants and programs designed to recruit minority and disadvantaged students into nursing. Once initiated, however, these programs exposed barriers to minority group recruiting efforts. These barriers fell into three distinct categories: (1) academic preparation; (2) attitudinal factors; and (3) financial support.

Most reports indicate that minority groups (blacks, in particular) have poor academic preparation for nursing study (Harvey, 1970; Yates, 1970; Scheinfeldt, 1967; Scheinfeldt and Palmer, 1970). Some differences of opinion exist, however, on ways to ameliorate academic deficiencies. Harvey (1970), for instance, views poor academic preparation among black youth as being symptomatic of broader social injustices and argues that "academic remediation alone would not result in significantly better scores or insure future achievement on a national average." Harvey's treatment seems more descriptive than prescriptive and leaves the impression that certain deficiencies among minority groups must await significant changes in the social structure or in the educational system before they can be diminished.

A second approach to the problem of recruitment views academic deficiencies as caused by factors external to the student's natural ability and, given proper remediation and guidance, many minority group members can be successfully directed into nursing careers. Scheinfeldt and her associates (Scheinfeldt and Palmer, 1970; Scheinfeldt, 1967) have generally confirmed the fact that many minority group members are poorly prepared in those subjects and skills most essential to nursing (for example, biology, chemistry, mathematics, and basic communicative skills) but maintain that inadequate counseling accounts for a measurable portion of these academic inadequacies.

In a study designed to assess high school counselor's knowledge of the requirements of three types of nursing schools (that is, diploma, associate degree, baccalaureate) and the characteristics of student needs in each (for example, program costs and length of study), Williams and Aichlmary (1971) found that counselors were often confused about unique school entrance requirements, had little knowledge of intraprogram credit transfer possibilities, and could not distinguished between professional and technical nursing. Most often counselors had prohibitive caseloads and could not provide the lengthy counseling services needed by many disadvantaged youth. In a survey of 384 freshman nursing students in several Atlanta, Georgia schools of nursing, Taylor and Richter (1969) found only 33 freshmen, or 8.6 percent of all freshmen questioned, identified the high school counselor as the person who most influenced their choice of nursing as a career. These findings support results reported by Lande (1966) who surveyed 934 female Catholic high school seniors. In that study 68 percent of those students who indicated a desire to enter nursing said their personal contact with nurses had influenced them positively in their choice of the nursing career. Lande did not, however, report data on the percentage of students who said the counselor had influenced their choice.

For the most part those programs set up to assist minority and disadvantaged students to bring up academic skills to acceptable levels have reported moderate levels of success (Scheinfeldt, 1967; Scheinfeldt and Palmer, 1970). The nature and scope of these programs are considered in greater detail under the Special Recruitment Efforts section below.

Another major barrier to the recruitment of minority groups into nursing is attitudinal. The literature suggests that a separate set of cognitions is operative among blacks and men which cause these groups to reject nursing as a career. First, the decision to enter nursing seems to be made at a fairly early age. In a survey of 348 student nurses, Taylor and Richter (1969) reported that over 50 percent of all respondents made firm decisions to pursue nursing careers in the high school years or earlier. Second, nursing as a professional career is typically viewed as a woman's domain. Vaz (1968) attempted to single out those factors which contributed to the disproportionate sex distribution in nursing and identify the conditions which acted as deterrents in the selection of nursing as a career by men. Using a checklist procedure, 506 high school boys were asked to rank several occupations on a masculinity scale. Nursing ranked last on masculinity and did not vary when other factors such as income, education, etc., were introduced. Vaz concluded that nursing was not perceived by men as a suitable masculine occupation, and before men could be attracted to the field in any significant numbers, a concerted effort to modify the sex-role perceptions of the nurse was clearly needed. It should be pointed out that most of the nursing literature reviewed here still refers to the nurse as "her" or tailors comments especially for women.

The attitudes of black students toward nursing have received considerably less attention than have those of males. One author, however, attempted to shed some light on this problem. Winder (1971) postulated that black women would view nursing as an extension of the servitude role (that is, waiting on others) rather than a service-oriented role, since black women in America have a history of being "domestics." For this reason it was predicted that black women would manifest significantly more negative attitudes toward both LPN's and RN's when compared to a white population. Thirty-two black and fifty white girls from the 10th grade were administered an attitude survey. No significant race differences obtained in the evaluative perception of either LPN's or RN's, although both groups held RN's in higher esteem than the LPN. Black respondents, however, showed significantly less chance to personalize their attitudes toward RN's through direct experience, a result which, in all probability, interacts with poor counseling and inadequate academic preparation in keeping a significant number of blacks out of nursing. Winder concluded that before black women could be recruited into nursing in representative numbers, they must have more exposure to nursing models. Scheinfeldt (1967) has also suggested that because black youth have been systematically excluded from past recruitment efforts, many are skeptical of current recruitment overtures.

Selection Criteria

Selection for admission to nursing schools is usually contingent upon a candidate's performance on a series of tests (for example, Scholastic Aptitude Test, National League for Nursing Test) designed to provide some indication of probable success in nursing school. Invariably the questions arise: Do these tests discriminate unfairly against the minority ethnic group member? Do they have any predictive validity for any group?

Clark and Plotkin (1964) and Cleary (1968), among others, have expressed concern that general ability tests may actually discriminate against blacks. According to Sedlacek and Brooks (1970) most large colleges and universities, however, still use these tests as the main criteria for admission as do most nursing schools.

Reports on the ability of tests to distinguish dropouts and general performance are equivocal. Haney, Michael, and Gershon (1962) found that grades on achievement tests in reading and mathematics were significantly related to formal course work in nurse training but were unrelated toward effectiveness or clinical experience. They found also that high school chemistry grades alone were more predictive of probable success in formal course work than overall high school grade point average. Madaus (1966), who undertook a study to examine the predictive validity of the National League for Nursing Pre-Nursing Examination for success in a 3-year diploma program, found that the correlations between test performance and nursing theory and science courses did not account for enough variance to make reliable decisions regarding admissions. Madaus concluded that the crucial area of clinical nursing course performance was unrelated to antecedent performance of any of the tests in the PNLN battery.

Ewen and Kirkpatrick (1967) conducted a series of studies designed to investigate ways and means of practicing fair selection procedures. Using a sample of black and white nursing students, these investigators sought to determine whether a battery of tests which measured several academic skills could predict scores on the State licensing examination, classroom and clinical ratings, and termination reports. Predictors were found to be valid for the white sample but mostly invalid for black subjects. The use of race as a moderator variable did lead to some improvement in prediction, however. The authors argued that separate selection procedures should be used for different ethnic groups; however, no indication was given as to just what selection procedures would constitute a "fair" selection. Applewhite (1971) has addressed the problem of admitting black and other minorities to medical schools. He has suggested that general motivation and personal interviews are more accurate indicators of probable success for these students than grade point average.

The problem of predicting probable success in nursing is a formidable task for minority and white candidates alike. May (1966) has suggested that nonintellectual factors might best be employed for prediction of student nursing success.

Training

Once accepted into a nursing school, minority and disadvantaged groups have a higher attrition rate than do their white counterparts (Scheinfeldt, 1967). The factors which contribute to this state of affairs represents a complex set of motivational and academic variables. Some minority nursing students have reported being ignored by their fellow classmates or made to feel inferior by their instructors (Scheinfeldt and Palmer, 1970). Cooper (1958) feels that teachers often fail to understand the very basic principles of motivation and, as a result, may be good nurses but poor teachers. A minimally effective teacher, according to Cooper, is one who becomes acquainted with the students and recognizes that teaching methods often need to be tailored to the individual needs of the students. In a more in-depth study Layton (1969) asked students about the perceived attitudes of instructors which seemed to help or hinder them most. An instructor's interpersonal skills were found to be more important in influencing students than course content.

Blacks who find themselves on white campuses or in predominantly white training institutions often experience difficulty adjusitng to and coping with the pressures (Chervis, 1971). Heath (1971) found that this is further complicated by the fact that many white instructors have difficulty relating to minority and disadvantaged students. Although some anecdotal evidence exists of discrimination in training practices in nursing schools, the phenomena is prevalent enough in other institutions of higher learning to warrant the assumption that it also exists in schools of nursing.

Special Recruitment Efforts

In this final section we will examine the recruitment efforts which have been made to increase the number of minority and disadvantaged groups into nursing. For the most part these efforts can be classified under two general approaches: *public appeals* and *special programs.*

Public Appeals

One of the most widely used techniques for mass recruitment is the public appeal (i.e., publicity efforts which utilize the mass media to encourage a specific target population to consider nursing as a career). One such program initiated by the E-Lax Drug Company ("A Nurse Recruitment Program," *Nursing Outlook,* April 1966) utilized the services of a professional public relations firm to launch a nationwide recruitment program. A brochure was designed depicting in words and pictures the experiences of one black student's nursing school activities from admission to graduation and was distributed throughout Harlem. A New York radio station provided facilities for recording and broadcasting several 1-minute spot commercials throughout the black community. Within a month over 4,000 responses were received from young people expressing an interest in nursing. New York residents who expressed similar interests were invited to hear speakers discuss the need for nurses, the role of the nurse in the community, etc. Although specific data on the success of this program were not made available, the general response was reported to be "excellent." Similar programs have been initiated in Washington, D.C., and other major metropolitan areas, but none offer followup information concerning the impact of such efforts.

While public appeals are generally helpful in publicizing the need for increased participation of certain minority groups in nursing, these approaches are usually too broad and far-reaching to pinpoint or address specific problems. Further, little time is ever devoted to evaluate followup of public appeals, and, therefore, the relative effectiveness of such efforts is difficult to assess.

Special Programs

Many nursing schools have attempted to increase minority group representation by setting up special, in-house recruitment programs. Since the publication of the Surgeon General's Consultant Group's report on nursing, many special recruitment programs have been initiated, each reporting varying degrees of success. Baugh (1972) reports on one of the more recent of these which has expanded into a nationwide program called Nursing Education Opportunities. This program uses as its model a program described by Scheinfeldt (1967) called, "Open Doors Wider in Nursing" (ODWIN). Since ODWIN was the prototype for many recruitment programs now in existence, it is described in detail below.

Scheinfeldt (1967) reports the efforts of the Boston University School of Nursing (BUSON) Alumni Association to mobilize its staff and students on behalf of actively increasing the number of black nursing students. Realizing that many problems were associated with this task and that they lacked expertise in this area, the problem was approached in several careful steps. First, inputs were elicited from black students and black nurses at BUSON. They discovered that there was a lack of accurate information, guidance, and general preparation provided potential black nursing aspirants in high schools. Also, recruitment teams were nearly always white, posters and advertisements typically portrayed white nurses exclusively, and films, textbooks, and other recruitment materials generally ignored the existence of black students. Black students were, for these reasons, generally suspicious of overt recruitment efforts. Attempts to interest them in nursing, then, would necessarily have to be active rather than passive (i.e., black students would have to be shown rather than be told that nursing had a place for them). ODWIN's staff adopted a policy to send out only racially integrated recruitment teams on all recruiting trips.

Community participation was also recognized as another necessary prerequisite for minority group recruitment. It was discovered that the general public had no clear conception of the various types of programs existing in nursing, the function of those programs, or the level of competence required for each. Most blacks who expressed an interest in nursing were usually directed to practical nursing and diploma-type programs rather than baccalaureate programs. This practice was attributed, in part, to a lack of informed counseling about appropriate nursing programs and required high school preparation. Community workshops were set up in which school counselors and the community at large were given information aimed at clarifying and differentiating various types of nursing programs, admission requirements, etc. ODWIN's staff established a community-based Future Nurses' Club, which was instrumental in recruitment efforts.

Active recruitment, although necessary, was found to be insufficient for increasing minority group nurses. Because of inadequate educational preparation, many students needed academic assistance to qualify for admission to and successful completion of required nursing programs. Two steps were taken to help alleviate this problem. First, semester loads for students admitted under ODWIN were reduced from 18 to 12 hours, with summer sessions devoted to making up credits so that it was possible to graduate on time. Next, with the aid of several grants, a summer program was established where students scheduled to enter nursing school the following fall could take advanced remedial courses in skills vital to their success (for example, English, chemistry, biology, physics).

ODWIN's success was encouraging. Since its conception in 1964, it has expanded its operations to include supplemental education for disadvantaged youth, formal classes, informal encounters, and counseling ("Project Expansion," Scheinfeldt and Palmer, 1970). In the third year of its operation, of 88 students placed in nursing programs, only 12 dropped out, fewer than 15 percent. Twenty-eight were in baccalaureate, thirty in diploma, fifteen in associate degree, and two in practical nursing programs (Scheinfelt and Palmer, 1970).

Although it is too early to assess the final success of ODWIN's program, some insights can be gained from the words of its former coordinator:

> We have learned what 'recruiting from a minority group' really means: an entire educational program. First of all, there must be a clear indication of the opportunities that exist in nursing. Then, the way to realize these opportunities must be outlined step by step. Guidance in high school is needed so that students will take the courses prerequisite to nursing, and to help them select the type of nursing education program best suited to their abilities and goals. Supplemental education and tutorial assistance, both in high school and nursing school, may be necessary. And, for many of these students, financial help is essential. (Scheinfeldt, 1967)

In general, barriers to recruitment seem to be academic (i.e., poor high school preparation and inadequate counseling) and attitudinal (i.e., men perceive nursing as a feminine occupation, and minorities perceive it as a white person's occupation). Financial barriers are heightened by increased costs of remedial education either through extended training programs or tutorial services which are, most often, passed on to students. Selection procedures have often discriminated unfairly against minority groups while teacher attitudes and expectations had often acted as self-fulfilling prophecies of student failure. Special programs have been designed which report an encouraging amount of success in helping prospective nursing candidates from disadvantaged and minority groups overcome many of the handicaps associated with their status.

The above survey of existing nursing literature has provided some important hypotheses concerning some of the factors which seem to contribute to the poor representation of disadvantaged, minority groups, and men in nursing. It was felt, however, that much of what was reported was opinion, some of it stemmed from questionable research, and it was almost all limited to one minority group (i.e., blacks) and to one limited area of the country.

It was therefore decided that a special study should be performed to determine if:

1. there is any support for the opinions and findings reported above;
2. the factors outlined were applicable to other minority groups;
3. those same factors were operating in some areas where there was a desire to initiate some recruiting efforts.

The rest of this report describes a research project carried out to answer those questions.

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IV. SURVEY DESIGN

There are many areas in which attitudinal and knowledge factors might contribute to an interest (or lack thereof) in nursing as a career. In considering each of these many factors, we realized that their number, in addition to the many questions that would have been necessary to probe each of these cognitive areas in detail, would have given rise to a survey instrument grossly unmanageable in size. That is, in designing a survey instrument which would tap a maximum number of content areas of interest, it was also necessary to take into consideration the burden placed on the student respondents and the schools. It was therefore decided that the length of the instrument would be governed by the length of the classroom periods, which, in the school systems that participated in the survey, ranged between 45 and 55 minutes. Thus some priorities were set. Initially, this was accomplished by assigning priorities to content areas, and then priorities were assigned to questions within these areas. Priorities were assigned by project staff based on areas of concern that were gleaned from reviews of the nursing and counseling literatures, information from the Hospital Council of Western Pennsylvania, the Pennsylvania Nurses Association, and the Pittsburgh Board of Education. The content areas of interest that resulted from these investigations and the method used for exploring them were:

Job Desirability.—The semantic differential, which has been employed previously with considerable success in collecting large quantities of information along both descriptive and evaluative dimensions (Osgood, *et al.*, 1957), was employed to measure attitudes toward a number of job desirability dimensions. This method was chosen instead of several others that were considered because of its economy of time in data collection and its efficiency in measuring the desired concepts. Twelve bipolar adjective sets were used to describe the desirability of nursing careers. (See pages 2 to 8 of survey instrument, appendix A.)

To place the results in a context that would allow for interpretation, four other occupations were also included in the instrument in an identical semantic differential format. The four additional occupations, *high school teacher, medical doctor, laundry worker,* and *secretary,* were chosen using two criteria: (a) a reasonable amount of female representation within the occupational field, and (b) the probability of the occupation being rated differently than an RN on the bipolar scales. The final choice of occupational fields was based on pilot tests where RN, the primary target of concern, was perceived as being located between the laundry worker (LW) and the medical doctor (MD), with secretary (SEC), located between the RN and LW, and the high school teacher (HST) located between the RN and the MD.

The additional occupations were used to anchor the concept "Registered Nurse," since the students' rating of this concept on an absolute basis would have been difficult to interpret. To anchor their responses further, a sixth occupational field was used: the student's own desired occupation (OWN).

Nursing School Admission Requirements.—As suggested by the literature review in this report, students are sometimes unaware of what high school courses and other special requirements are needed for admission to nursing schools. Thus, a second section of the survey instrument was designed to assess the extent to which students were aware of critically required high school courses and other special noncourse requirements of nursing schools. In order to determine whether any knowledge deficits were peculiar to nursing or whether there was a general lack of knowledge of higher educational requirements, nursing school requirements were embedded among those for three other post-secondary educational institutions: *junior college, vocational and technical schools,* and *4-year colleges.* It was recognized that considerable variation exists in institutional requirements both within and across geographical regions; however, the intent of this section was to tap student awareness of those requirements most generally needed.

Starting Salaries of Occupations.—Financial reward is almost always cited as a major factor influencing choice of occupations. A third section was designed to assess student knowledge of the starting salaries of the registered nurse and the other target occupations used to assess job desirability. The instrument was designed to assess both the accuracy of perceptions by comparing the results to actual beginning salaries and to examine the perception of nurses' salaries relative to other target occupations. This section differed from the financial reward subscale of the semantic differential in that it provided a measure of beginning salaries in actual dollar amounts instead of the relatively unanchored five-point scale.

Nursing Tasks.—Since there was reason to believe that the nature of the tasks that are performed by an occupation are part of the lure into that occupation, a fourth section was designed to measure students' knowledge of the tasks most frequently performed by hospital duty nurses, as well as their attitudes of the pleasantness associated with performing those tasks. The hospital duty nurse was chosen because it represents the largest single category of nurse employment and also represents an environment where a wide variety of nursing tasks are performed. It also represented a setting with which most students would be expected to be reasonably familiar.

In the first part of this section, a list of nursing tasks was chosen to represent a variety of health care, recordkeeping, custodial, supervisory, administrative, and professional tasks. These tasks were presented to students who were asked to select the 5 tasks that they thought hospital duty nurses spent most of their time performing. In the second part of the section, students were asked to rate each of the tasks according to how pleasant they thought each task was.

Academic Preparation for Nursing School Admission.—As was suggested in the literature review above, many students do not take the high school courses required for admission to nursing schools. This section of the survey instrument was designed to assess which of the required courses students would have successfully completed by the time of their graduation and when those courses were taken. One of the reasons for using these items was to determine in which grades the recruitment and guidance program should be presented.

Demographic Data.—A general background section was included to select specific information to assist in the analysis and interpretation of the data, which included information regarding ethnic origin, sex, date of birth, and family size. Other information that was collected in this section included:

Father's and mother's education.
Father's and mother's occupation.
Career decision (desired occupation).
Plans to go to college.
Number of time student had talked to his high school counselor about careers.
Desire for career as registered nurse or other health professional.
Personal acquaintance with registered nurse and/or other health professional.
Importance of working after completing high school.
Amount of own financial support needed after completing high school.

A copy of the survey instrument used to survey students in the Arizona and Tallahassee areas can be found in appendix A. That instrument is essentially identical to that used in Pittsburgh, except the Pittsburgh instrument:

1. Was not precoded;
2. Contained the terms "financially rewarding" and "financially unrewarding" as anchors on the first semantic differential scale;
3. Within the admission requirements and additional requirements sections, contained lists of requirements requesting the students to choose some items (three and two respectively) from that list that applied to each school type (the same list was used as that in the instrument in the appendix, except in the latter instrument the list is repeated after every school type);
4. Contained the following 10 salary categories:

Under $ 4,500	Under $ 80
4,500	86
5,200	100
6,400	120
7,000	134
7,800	150
8,500	163
10,000	192
11,500	220
13,000+	250+

5. In the two sections on nursing tasks, contained some, but not others, as shown, mostly because the Pittsburgh instrument showed the propensity of studeents to check low-level health care tasks, and so higher level health care tasks were added to allow for the discrimination:

Contained these tasks

Attends professional conferences
Explains nursing procedures to relatives
Irrigate wounds
Keeps patient records
Turns patient

Did not contain these tasks

Administers medications
Assists in operating room
Attends staff meetings
Discusses nursing case with doctor
Inserts catheter
Monitors post-surgical drainage tubes
Starts and monitors intravenous injections

6. Asked about participation in a scholars' program not in effect in the other two geographical areas;
7. Requested race only in three categories (black, white, and other); and
8. Contained questions about whether the respondent had difficulty with any of the questions in the instrument, since it was the first mass administration of the instrument and a preliminary evaluation of the instrument's intelligibility was desired.

V. METHOD

Sampling Plan

Pittsburgh Site

At the time the attitude survey was conducted, the public school system of the City of Pittsburgh had 13 high schools under its jurisdiction, with a total enrollment of over 23,000 students. These schools could be divided along a rough racial predominance dimension into three groups: (a) predominantly white (25 percent or fewer minority group students); (2) predominantly black (25 percent or fewer white students); and (c) middle range, or racially mixed (schools whose proportion of minority students ranged between 26 and 74 percent). Each of these schools could be further divided along a socioeconomic dimension based primarily on the general characteristics of the neighborhoods which supplied students to the schools (See table 1.). For want of a reasonable set of terms to describe the socioeconomic discrimination, we have divided the schools into two groups and have herein termed them as upper socioeconomic status (SES) and lower socioeconomic status (SES). Table 1 gives the racial and socioeconomic breakdown of these 13 high schools. The percentage of minority group students in each school is given in parentheses beside each school. While the racial breakdown was based on actual data supplied by the Pittsburgh Board of Education, the socioeconomic categorization is based on consensus judgments of the project staff.

Table 1.—Racial and socioeconomic predominance of Pittsburgh city high schools

Socioeconomic status (SES)	Predominantly black schools	Racially mixed schools	Predominantly white schools
Upper SES	[1] Schenley (80%)	Peabody (30%)	Allderdice (9%)
Lower SES	[2] Westinghouse (99%) [2] Fifth Avenue (99%)	Gladstone (56%) Oliver (36%) [2] Perry (33%) Allegheny (37%)	South Hills (17%) Carrick (6%) South (13%) [2] Langley (17%)

[1] Numerical entries represent percentage of minority group students as of academic school year September 1972–73.

[2] Schools that participated in survey.

In attempting to draw a sample of students which best reflected the racial and socioeconomic distribution of students in the Pittsburgh area, six high schools were selected to participate in the study. These schools were: Schenley, Peabody, Allderdice, Westinghouse, Perry, and Langley. Since many nursing students have Catholic parochial high school backgrounds, it would have been desirable to include a representative sample of these students in the Pittsburgh survey to see if their knowledge and perceptions of nursing differed from students in public high schools. Three Catholic high schools were contacted and asked to participate in the study. Although each of these schools expressed an interest in the study, they refused to participate, indicating that due to severe financial problems, the survey would place an extreme burden on their time and resources. The fact that several Catholic high schools were soon thereafter forced to close, sending their students to public schools the year following the survey, was evidence of the severity of their problem.

After obtaining general approval from the Pittsburg Board of Education to conduct the survey, a letter was sent to the principal of each school selected to participate, explaining the general purpose of the survey and asking permission to include their school in the study. Of the six schools originally selected, three (Schenley, Peabody, and Allderdice) were unable to participate because of administrative conflicts or because their senior students were participating in other outside research projects. Those schools which finally agreed to participate are presented in table 2, which gives the racial and sex breakdown of each participating school. It should be pointed out here that, because several of the schools that were initially chosen were unable to participate in the survey, we were unable to preserve the desired socioeconomic distribution. Student participating in the survey were, however, about equally distributed over race (341 white and 304 black students) and sex (320 males and 325 females).

Table 2.—Distribution of students surveyed in Pittsburgh by school, race, and sex

Schools	Black			White			School total
	Male	Female	Total	Male	Female	Total	
Langley	9	17	26	98	96	194	220
Perry	22	33	55	70	77	147	202
Westinghouse	98	72	170	---	---	---	---
Fifth Avenue	23	30	53	---	---	---	---
High school totals	152	152	304	168	173	341	[1] 645

[1] Fourteen students who did not indicate race and/or sex on their survey forms were omitted from grand total and subsequent analyses.

To get some idea of students' emerging perceptions of nursing and the nursing field, a sample of ninth grade students was included as part of the data-collecting activities in the Pittsburgh area. These students were drawn from Herron Hill Junior High School, which is located in a predominantly black Pittsburgh area neighborhood. The results for this group are not included in this report but may be found in the expanded project report previously referenced.

Tallahassee Site

At the time the survey was conducted, Leon County, of which Tallahassee is the county seat, had three senior high schools with a total approximate enrollment of 6,083 high school students, 66 percent of whom were white and 44 percent black. Students sampled in Leon County included all seniors who attended class and were available for survey at each of the three high schools on the day the survey was administered. Table 3 gives a breakdown of student respondents by school, race, and sex.

Table 3.—Distribution of students surveyed in Tallahassee by school, race, and sex

Schools	Black			White			School total
	Male	Female	Total	Male	Female	Total	
Godby	25	32	57	64	77	141	198
Leon	31	46	77	104	80	184	261
Rickards	38	52	90	27	38	65	155
Total (all schools)	94	130	224	195	195	390	614

Although the Tallahassee area was chosen to provide a sample of rural black and white students from economically disadvantaged backgrounds, several problems were encountered in delineating these groups in Tallahassee. To appreciate this problem more fully, it is helpful to review sampling procedures in the other sites. In Pittsburg, for example, the target population for the survey was the urbanized black student. Since all students in the schools surveyed came from urban backgrounds, it was only necessary to isolate the respondents' race to identify the sample group. A similar situation prevailed in Arizona in identifying the Mexican American and American Indian target groups.

In Tallahassee, however, the target population, poor whites and rural blacks, was less easily discernible. According to 1970 census figures, 103,047 people lived in Leon County. Approximately 70 percent lived inside the city limits of Tallahassee, and of the remaining 30 percent, most lived in areas directly adjacent to the city limits in residences which could mostly be described as suburban. This breakdown makes it extremely difficult to classify students in the Tallahassee area as "rural." From an economic standpoint, the total civilian labor force breakdown, according to the Florida Department of Commerce, was approximately 48,600 in 1970, with only 600 people classified as unemployed.

Since no way was available of having students self-designate themselves into the categories of rural and/or economically disadvantaged that would not have contaminated the overall survey results, we have not attempted to characterize the poor and rural black target groups in analyzing these data.

Arizona Site

At the time of the survey, the Phoenix Union High School System had 10 high schools located in the 173 square mile area of Metropolitan Phoenix. Since the primary target populations in Arizona were American Indians and Mexican Americans, the 10 high schools were ranked according to the percentage of Mexican American (Chicano) students in each, using figures supplied by the Phoenix Union High School System (Annual Report of the Phoenix Union High School System, 1971–72). Three schools which contained the largest percentage of Chicano students in the area were selected: Phoenix Union High School, with 52 percent Chicano population; Carl Hayden High School, with a 39 percent Chicano population; and South Mountain High School, with a 29 percent Chicano population. In their aggregate, these schools accounted for approximately 400 Mexican American seniors during the school year 1971–72, with projections for the school year 1973–74, the year in which the survey was conducted, in excess of 400. Since the percentage of Indian students in the Arizona public school system was negligible, Indian respondents were drawn from the Bureau of Indian Affairs (BIA) and reservation schools. Four schools, the two BIA schools (one of which was located in Phoenix) and two public schools located on the Indian reservations, were chosen to obtain Indian respondents.

Each school was contacted, and of the seven, six agreed to participate in the survey. South Mountain High School was unable to participate, because it had recently converted to a quarter system and was in the process of student registration at the time of the survey; in the opinion of the school principal, it could not bear the burden of additional disruptions during that time. A total of

920 students were surveyed at the Arizona site. Of that number, 46, or approximately 5 percent, were eliminated from several of the analyses because they did not complete the survey. Also, 76 black respondents representing approximately 8 percent of the total sample population were eliminated since they did not constitute a major target group in the area and including them would have considerably complicated the inter-race comparisons. Given the above omissions, a total of 798 students were included in the final analysis of data for Arizona. Table 4 gives a breakdown by race and sex of these 798 students.

Survey Administration Procedures

The survey instruments were administered in two types of settings: mass or individual classrooms. When mass administration procedures were used, the survey was conducted in either the school auditorium or school cafeteria. During these administrations, the teachers usually responsible for the students during those class periods served as monitors.

In most instances several counselors assisted in the monitoring of mass administration sessions. Since English and social studies were mandatory subjects for all seniors, the survey was administered to each senior English or senior social studies class when individual classroom administration procedures were used, thus making it possible to survey most senior students. Sufficient staff was available so that at least two monitors were in each class in addition to the project staff member. No problems were encountered in either mass or individual classroom data-gathering setting. Students were generally receptive and in some cases asked questions about the design, content, or use of the survey after data had been collected.

Table 4.—Distribution of students surveyed in Arizona by school, race, and sex

Schools	Indian			Chicano			White			School totals
	Male	Female	Total	Male	Female	Total	Male	Female	Total	
Many Farms	52	76	128	---	---	---	---	1	1	129
Tuba City	40	40	80	---	1	1	9	5	14	95
Chinle	47	53	100	---	---	---	9	2	11	111
Phoenix Indian	40	49	89	---	---	---	---	---	---	89
Carl Hayden	4	1	5	81	63	144	72	87	159	308
Phoenix Union	2	1	3	29	28	57	1	5	6	66
Total (all schools)	185	220	405	110	92	202	91	100	191	798

VI. RESULTS

Job Desirability

The four occupations included in the survey in addition to *registered nurse* were chosen with the expectation that their rank-ordering from highest to lowest on most scales would be: *medical doctor, high school teacher, registered nurse, secretary,* and *laundry worker.* The five scale positions in the semantic differential were converted to numerical scale points, with 5 being assigned to the most favorable end when the concept "favorable" applied (i.e., all scales except the sex-relatedness, education, self-supervision, and work difficulty subscales, where the "women's work," "lot of education," "chance to supervise self," and "easy work" ends were assigned the value 5). Using these numerical weights, mean scale points were computed for the six occupations for sex/race groups (i.e., black males, black females, white males, white females, Chicano males, Chicano females, Indian males and Indian females), as well as total race groups and total sex groups. These mean ratings are presented in tables 5 through 40 for each subgroup mentioned above.[1]

It should be noted that several response patterns might result in a score in the middle of the scale (e.g., an equal number of extremely high and extremely low ratings or a high frequency of neutral scores would both result in an average around 3.0); however, only a fixed pattern of responding (i.e., almost all students checking either 1.0 or 5.0) would result in mean scores which approach 1.0 or 5.0. Thus, for each semantic subscale (i.e., financial reward, personal reward, education, etc.) a one-way analysis of variance was performed between the mean ratings of RN for black males, black females, white males, white females to determine, if among these four subgroups' means there was any significant difference. Where the overall F-ratio was found to be significant at or beyond the .01 level of significance, a Duncan's Multiple Range Test was performed (alpha set at .01) to identify those race/sex means (i.e., black males, black females, white males, white females) which differed significantly from each other. A one-way analysis of variance was also used to examine racial (i.e., black vs. white) and sexual (male vs. female) differences in the mean ratings of RN.

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[1] Tables in this chapter are presented at end of chapter, beginning on page 80.

To determine whether there were significant differences between how students rated RN and their own desired occupations, studentized t-tests for correlated observations (Winer, 1962) were performed between the mean ratings of RN and OWN for black males, black females, white males, white females, total race (e.g., black vs. white), and total sex (males vs. females) subgroups. This latter procedure made it possible to determine whether students rated their own desired occupations differently from RN and, if so, in what direction (i.e., significantly above or below RN on any particular subscale). The results of these analytic procedures are presented below under the appropriate subscale headings. Differences between individual schools, a concern secondary to race and sex variations, are excluded fom this main report to avoid unnecessarily complicated reporting. Between-school differences, when observed, were minor and most probably were due to differences in the racial composition of schools.

Financial Reward

The financial reward subscale was anchored with the expressions "financially rewarding" (5.0) and "financially unrewarding" (1.0). Tables 5, 6, and 7 give the mean target ratings on the financial reward subscale. For senior students, the mean occupation ratings ranged from a low of 1.4 for laundry worker (Tallahassee) to a high of 4.7 (Tallahassee) for medical doctor, indicating that the respondents used most of the scale (and at least at one site, used approximately 86 percent of it) to assign occupational ratings.

Students did not rate the occupations in the order that they were expected to be ranked (i.e., laundry worker, secretary, registered nurse, high school teacher, medical doctor). That they consistently rated laundry worker as the least financially rewarding occupation, followed by high school teacher, secretary, registered nurse, and medical doctor, not only shows that students seriously engaged the semantic differential task, but also that they made clear discriminations between the various occupations on this particular subscale. Four of the six occupations, however, were rated above the neutral (3.0) point.

In Pittsburgh, the mean RN ratings by black males (3.6), black females (3.8), white males (3.6), and white females (4.1) were significantly different from each other ($F=5.534$, $df=3/641$, $p<.001$). The Duncan's Multiple Range applied to these four race/sex subgroup means yielded two homogeneous subsets of means (i.e., two distinct subsets of means where, within subsets, means did not differ significantly but where means between subsets did) formed by black males, white males and black females in one subset and white females in the other. The mean rating of RN by white females (i.e., 4.1) was the highest of the four race/sex subgroups, showing that white females regarded the RN as more financially rewarding than did the other subgroups.

Although the RN means by blacks (3.7) and whites (3.9) approached but did not reach the established level of significance, the means for males (3.6) and females (3.9) did (F=10.497, df=1/644, $p<.01$). It appears, however, that the observed sex difference resulted from the high rating of RN by white females.

To detemine whether students rated their own desired occupations significantly different from RN on the financial reward subscale, t-tests were performed between the mean ratings of RN and the mean ratings found for their own desired occupations and these results are presented in the last columns of tables 5 through 7. The direction of difference is indicated by the sign associated with the mean difference, where a plus (+) would have indicated the mean rating of RN was higher than OWN on the scale and a minus (−) indicates the mean rating of RN was lower than OWN on the scale. All mean differences were negative (i.e., RN was perceived to be less financially rewarding than OWN) and, with the exception of white females, all were significant beyond the .01 level. With the exception of white females, students thought that their own desired occupations would be substantially more financially rewarding than registered nursing.

In Tallahassee, the mean ratings of RN for the four race/sex subgroups were: 3.3 for white males, 3.7 for white females; 4.0 for black males and black females. The overall difference between these four subgroup means was significant (F=15.112, df=3/614, $p<.001$) where the mean rating by white males was significantly lower than the mean rating by white females and both of these were significantly lower than means by black males and black females, whose mean ratings were not significantly different from each other.

The mean difference between the ratings of RN and own desired occupation on the financial reward subscale were all negative and significant, indicating that all subgroups considered their own desired occupations to be significantly more financially rewarding than registered nursing.

To determine whether students in Tallahassee rated the RN differently on the financial reward subscale than students in Pittsburgh, one-way analyses of variance were performed between white students, black students, and sex groups in each site. White students in Tallahassee rated the RN significantly lower on the financial reward subscale (3.5) than white students in Pittsburgh (3.9); however, black students in Tallahassee rated the RN significantly higher than black students in Pittsburgh (4.0 vs. 3.7). Both of these mean differences were found to be significant beyond the .01 level of confidence. No significant differences were found between the mean ratings by males and females between the two sites.

In Arizona, mean RN ratings ranged between 3.5 for both Chicano males and white males to 4.1 for Indian females. The overall difference between these six subgroup means was significant ($F=8.130$, $df=5/800$, $p<.001$) where three homogeneous, overlapping subsets of means were formed by: (a) Chicano males (3.5), white males (3.5) in the first subset; (b) Indian males (3.7), Chicano females (3.8) ,and white females (3.9) in the second subset; and (c) Indian females (4.1) in the third subset.

Chicanos rated the RN significantly lower than did the Indians, but the mean by white students, which fell between the two, was not significantly different from either. Despite the significant differences between race subgroups, differences between sex groups were more substantial: males rated RN's significantly lower than females ($F=26.670$, $df=1/803$, $p<.001$).

The mean ratings of Arizona students' own desired occupations were high, but not as high as those for the medical doctor. The difference between the means of RN and own desired occupation were negative (i.e., financial rewards of RN were considered less than OWN) for all subgroups except Indian females. From table 7 it is clear that Arizona males thought that the financial rewards of nursing were significantly less than those of their own desired occupations while Arizona females did not.

Summary.—No overall significant differences obtained between sites; students in Pittsburgh (3.8), Tallahassee (3.7), and Phoenix (3.8) rated the RN about the same with respect to financial reward. Sex emerged as the strongest factor which differentiated the perception of financial rewards associated with nursing. Across all sites, males (3.6) rated the RN lower than females (3.9).

Amount of Education

This subscale was anchored with the bipolar expressions "lot of education needed" and "little education needed," where "little education" was arbitrarily set at 1.0. Mean scale ratings for each occupation are provided in tables 8, 9, and 10 for all sites, and for all appropriate sex and race subgroups, as well as mean ratings for the total group. The lowest mean rating given to an occupation by any senior subgroup was 1.2 for laundry worker, and the highest was 4.9 for the medical doctor. Thus students used about 90 percent of the total scale to distribute their mean ratings (although the Tallahassee and Arizona students were somewhat more constricted in their use of the scale). Means for the total group show that the laundry worker was perceived as requiring the least amount of formal education and the medical doctor was perceived as requiring the most. With the exception of laundry worker, and high school teacher in Tallahassee and Arizona, all occupations had mean ratings above 3.0, with secretary being rated above laundry worker, RN above secretary, and medical doctor above secretary. Students, by and large, made clear distinctions between occupations with regard to the amount of education required to achieve each. Ratings for own desired occupation were less than the RN for all subgroups.

The ratings for own desired occupation generally ran higher than those for secretary, indicating that most of the students (particularly the males) expected some post-high school education. In Pittsburgh, the ratings ran close enough to high school teacher to deduce that their aspirations were leading them toward a college education. In the other two sites, however, the ratings of the education required for high school teacher were so unrealistically low as to make a similar analysis impossible.

In Pittsburgh, a one-way analysis of variance performed between the mean ratings of RN by black males (4.2), black females (4.4), white males (4.2), and white females (4.6) was significant ($F=6.813$, $df=3/641$, $p<.001$), and a Duncan's Multiple Range Test showed that the mean ratings of RN by white males (4.2) and black males (4.2) were not significantly different from each other, but both were significantly different ($p<.01$) from the mean rating by white females (4.6). The mean rating by black females (4.4), the third homogeneous subgroup, was significantly higher than the mean ratings by black males and white males but significantly below the 4.6 rating found for white females. No significant race differences on this subscale were found. Females, however, perceived RN to be significantly more difficult to achieve educationally than did males ($F=10.684$, $df=1/643$, $p<.01$).

The last column of table 8 provides differences between the mean ratings of RN and own desired occupation. Again, a positive on the difference score indicates that the mean rating of RN was above that of OWN and is interpreted to mean that students perceived RN as requiring more education than their own desired occupations. The differences for black males and white males were not significant; however, similar values for black females and white females were. Thus males, as a group, did not perceive RN as being any more difficult to achieve educationally than their own desired occupations, while females as a group did.

In Tallahassee (table 9), education subscale means for the RN in each subgroup were high (above 4.0). Ratings of RN on this subscale by black males (4.0), black females (4.4), white males (4.2), and white females (4.4) were not significantly different from each other at the .01 level of confidence. One-way analyses of variance were performed to determine whether overall race or sex differences prevailed. No significant differences were found between the mean rating of RN by black or white students; the mean by males, however, was significantly lower than the mean by females (F=10.684, df=1/614 ,$p<.001$).

The difference between mean ratings of RN and own desired careers revealed no significant differences in the way males of either race group rated their own desired occupations relative to RN; however, both black and white females rated their own occupations as requiring significantly less education than an RN career.

No racial or sexual differences obtained between the mean ratings of RN by students in Tallahassee and Pittsburgh on the education subscale. In Arizona, some variation was found between race and sex subgroup RN means. Indian males ranked RN's lower (4.0) than any other subgroup, followed by Indian females (4.2), Chicano males (4.2), white males (4.2), Chicano females (4.4), and white females (4.6). The overall difference between these six race/sex subgroup means was significant (F=904, df=5/790, $p<.001$) as were the differences between race group RN means (combined across sexes) significant (F=17.054, df=1/790, $p<.001$).

Student subgroups thought their own desired occupations would be less educationally demanding than that of an RN. With the exception of total males, Indian males, and Chicano males, all other mean differences were significant at or beyond the .01 level of confidence.

While no significant difference obtained between the mean ratings of RN on this subscale by white students in Arizona and white students in Pittsburgh, the overall difference between RN means by Indians, blacks, Chicanos, and whites was significant (F=4.874, df=3/2053, $p<.001$), where Indians rated the RN as requiring significantly less education than any other ethnic subgroup.

Personal Reward

The personal reward subscale was anchored with the expressions "personally rewarding" (5.0) and "personally unrewarding" (1.0). The mean ratings for all occupations at all sites are presented in tables 11, 12, and 13. Mean ratings ranged between 1.3 as the lowest to 4.8 as the highest, with these two extreme scores accounting for approximately 87.5 percent of the total scale. As found in previous subscales, the laundry worker was perceived by the total group as the least personally rewarding occupation and the medical doctor the most personally rewarding of the five target occupations.

In Pittsburgh, the mean ratings of RN for the four race/sex subgroups, from the lowest to the highest, were 4.0 (black males), 4.1 (white males), 4.1 (black females), and 4.6 (white females). The difference between these means was significant ($F=11.834$, $df=3/641$, $p<.01$), and the Multiple Range Test showed that black males, white males, and black females formed a homogeneous subset whose means were not significantly different from each other, but all means within this subset were significantly different from the similar rating by white females. Although white females perceived registered nursing to be significantly more personally rewarding than did all other groups, the other groups did perceive nursing to be highly personally rewarding.

The mean ratings of own desired occupation were significantly higher than similar ratings of RN by black males, black females, and white males, but not for white females. As observed in the above results, while black and white male students rated RN significantly below their own occupations with regards to personal rewards, white females perceived no difference between the personal rewards of nursing and their own desired occupations.

In Tallahassee, the mean ratings for RN between the four race and sex subgroups showed the same trend as in Pittsburgh: 3.9 by black males; 4.0 by black females; 4.1 by white males; and 4.5 by white females. The one-way analysis of variance between these four subgroup means was significant ($F=13.967$, $df=3/613$, $p<.001$), and the Duncan's Multiple Range Test revealed that the means generated by black males, black females, and white males were not significantly different from each other but were significantly different from the mean rating by white females.

The ratings of own desired occupation were higher than similar ratings for RN for all subgroups. The discrepancies between the mean ratings of RN and students' own desired occupations were, with the exception of black males, significant at or beyond the .01 level, indicating a perception that their own desired occupation was more personally rewarding than RN.

No significant differences were found between racial or sexual subgroups in Tallahassee and Pittsburgh in the ratings of RN with respect to personal reward. In Arizona, the RN was rated as the second most personally rewarding occupation by each race/sex subgroup, with the overall difference between these six subgroup means being statistically significant ($F=13.554$, $df=5/798$, $p<.001$). There was some overlap between race and sex subgroups' ratings of RN. Indian males and females rated RN significantly lower than did white males, Chicano females, and white females. Between ethnic groups, Indians perceived RN significantly lower than did Chicanos or whites, and the difference between the latter two race group means was not significant. Males (4.0) rated RN significantly lower than females (4.2).

The differences between the ratings of RN and own desired occupation were significant for Indian males, Chicano males, total Indians, and total males but not significant for any of the other subgroups. No significant differences were found between the mean ratings of RN for whites in Pittsburgh and whites in Arizona.

Occupational Status

The bipolar expressions "low status occupation" (1.0) and "high status occupation" (5.0) were used to identify the occupational status subscale. Mean target ratings were found for each subgroup by the procedures outlined previously and are presented in tables 14, 15, and 16. Occupation means ranged between 1.3 as the lowest (laundry worker) and 4.8 as the highest (medical doctor), indicating that students used approximately 87.5 percent of the total scale to distribute mean occupational ratings. As was expected, students consistently rated laundry worker as the lowest status occupation and medical doctor as the highest, making clear distinctions between occupations with regards to occupational status.

In Pittsburgh, an analysis of variance performed between the mean ratings of the RN by black males (3.9), black females (4.1), white males (3.6), and white females (4.2) was significant ($F=10.635$, $df=3/641$, $p<.001$). Groups having mean ratings that were significantly different from each other were found using a Duncan's Multiple Range procedure (alpha = .01). These were white males (3.6), black males (3.9), and white females (4.2). The mean rating by black females (4.1) was significantly different from white males, but not significantly different from the mean ratings of black males or white females.

In comparing RN to their own desired occupations, both black males and white males rated RN significantly below their own desired occupations, while the ratings by both female groups did not show differences between their own desired field and RN that were statistically significant.

In Tallahassee, white males rated RN lowest (3.6), followed by black males (3.9), black females (4.0), and white females (4.0). The overall difference between these four race/sex subgroup means was significant (F = 6.413, df = 3/613, $p<.001$), and the Duncan's procedure showed that the mean RN rating by white males (3.6) was significantly lower than any of the other three subgroup means, while no significant differences were found between these other three race/sex subgroups.

All subgroups rated their own desired occupations higher than RN. These differences, with the exception of black females, were all significant ($p<.01$).

Ananlyses between students in Pittsburgh and Tallahassee indicated no significant racial or sexual differences in the ratings of RN on the occupational status subscales. In Arizona, a significant overall difference obtained between the mean ratings of RN by the six race/sex subgroups (F = 9.354, df = 5/798, $p<.001$). Three homogeneous, non-overlapping subgroups were formed where the mean of (a) Indian males (3.6) was significantly lower than the means of (b) white males (3.8), Indian females (3.8), and Chicano males (3.9), and these were significantly lower than those of the (c) Chicano females (4.2) and white females (4.2).

Students generally rated their own desired occupations slightly higher than RN, but only the difference for total males was significant.

In comparing the mean ratings of RN on the occupational status subscale, no significant differences were found between the students in Pittsburgh, Arizona, or Tallahassee.

Sex-Relatedness

The sex-relatedness subscale was arbitrarily anchored with the expressions "typically a woman's occupation" at the high (5.0) end and "typically a man's occupation" at the low (1.0) end. Tables

17, 18, and 19 provide the mean occupational ratings for each subgroup at each site. Students used a more restricted range of response on this scale than they did on the other scales. With subgroup mean scores ranging from 1.9 to 4.5, only 65 percent of the scale was used. The secretary and the RN were considered to be highly female-related, while the medical doctor was perceived to be highly male-related, a result consistent across all subgroups and all sites. Two occupations, i.e., the laundry worker and the high school teacher, were consistently rated neutral with regards to sex-relatedness. RN was perceived by all students as very female-related, and only slightly less so than secretary.

No significant racial or sexual differences were found among the mean ratings of RN in Pittsburgh or Tallahassee, while the differences between the mean ratings of RN and own desired occupation were significant for each subgroup. In Arizona, however, Indians (3.9) thought RN significantly less female-related than Chicanos (4.1) who, in turn, thought the RN significantly less female-related than did whites (4.4), while no significant differences obtained between the mean ratings of males (4.0) and females (4.1).

All differences between the means of RN and own desired occupation were positive, however, indicating that Arizona students, like Pittsburgh and Tallahassee students, and regardless of race or sex, thought of their own occupations as less female-related than RN. These differences were significant for all subgroups at or beyond the .01 level of confidence.

Work Enjoyableness

The mean occupation ratings in the work enjoyableness subscale, which contained the bipolar expressions "enjoyable work" on the high extreme (5.0) and "boring work" on the low extreme (1.0), are presented in tables 20, 21, and 22, along with the difference between the means of RN and own desired occupation. For the various subgroups across sites, these ratings were found to be as low as 1.4 and as high as 4.6, representing 80 percent of the range of the scale. The laundry worker was consistently designated as the least enjoyable occupation, and the medical doctor the most enjoyable. In most cases students agreed on the rank-order of occupations, where RN ranked as the second most enjoyable occupation and the high school teacher was third.

In Pittsburgh, the mean ratings of RN for the race/sex subgroups were significantly different ($F=7.856$, $df=3/641$, $p<.01$). A Duncan's Multiple Range showed that white females (4.1) rated RN significantly higher than black males (3.6), black females

(3.8), and white males (3.9). Differences between these latter three subgroup means were not significant.

The mean rating of RN was lower (i.e., less enjoyable) than similar ratings found for own desired occupation, and the differences between these two sets of means were all highly significant.

In Tallahassee, between the four race/sex subgroups, the RN received ratings of 3.5 by white males, 3.6 by black males, 3.8 by black females, and 4.1 by white females. Overall, the difference between these four subgroup means was significant (F=11.432, df=3/613. $p<.001$), where the four race/sex subgroup means were patterned in the following manner: white males (3.6) was significantly lower than the similar rating by black females (3.8); black females was significantly lower than the RN mean by white females (4.1); and black males (3.6) was significantly different from white females but not significantly different from white males or black females. Combining sexes, the difference between the means by blacks (3.7) and whites (3.8) was not significant; in combining races, however, the similar rating by males (3.6) was significantly lower than the rating by females (4.0). In effect, all student subgroups perceived their own desired occupations as being significantly more enjoyable than the work associated with nursing.

One-way analyses of variance were performed between race and sex groups in Tallahassee and Pittsburgh. No significant differences were found between these survey site groups.

In Arizona, some variation existed between the race/sex subgroup ratings of RN where the overall difference was significant (F=5.940, df=5/798, $p<.001$). The means of Indian males and white males were not significantly different from each other, but both were significantly different from similar ratings by white females, Chicano males, Indian females, and Chicano females. The latter four subgroup means also were not significantly different from each other.

Students regardless of race or sex thought their own desired occupations would be significantly more enjoyable than RN careers.

No significant differences obtained between the mean ratings of white students in Pittsburgh and white students in Arizona.

Occupational Challenge

The bipolar expressions "challenging" (5.0) and "unchallenging" (1.0) were used to define this subscale, and the mean subgroup ratings presented in tables 23, 24, and 25 ranged between 1.4 and 4.8, indicating that students used about 85 percent of the total scale to rate the occupations. The medical doctor was rated as the most challenging occupation, while the laundry worker, as expected, received the lowest mean rating. The RN, rated as the second most challenging of the five occupations, received relatively high subgroup scores.

In Pittsburgh, the four race/sex subgroup means were significantly different (F=4.046, df=3/641, $p<.01$), with the Multiple Range procedure yielding two homogeneously different subsets of groups consisting of black males and white males in one subset whose means were not significantly different from each other but were significantly different from white females' mean RN ratings, the second subset. The mean RN rating by black females was between these two subsets of groups and not significantly different from either.

Differences between RN and OWN were negative and significant for males only, indicating that RN was considered to be less challenging than students' own desired occupations for that sex group.

In Tallahassee, the one-way analysis of variance performed between the mean ratings of RN for black males (4.2), black females (4.2), white males (4.0), and white females (4.4) was not significant. Students of both race and sex subgroups regarded the RN as a highly challenging occupation second only to the medical doctor.

Some interesting racial differences were observed between the ratings of students' own desired occupations and similar ratings for RN. Neither the mean found for black males (4.5) nor black females (4.2) for own desired occupations was significantly different from similar ratings of RN. Mean own desired occupational ratings by white males and white females both were significantly different from similar ratings given to RN, however.

The comparative analysis performed between students in Tallahassee and students in Pittsburgh indicated no significant racial or sexual differences in the mean ratings of RN by student subgroups.

In Arizona, considerable variation was observed between mean RN ratings by sex groups within each race where Indian males, with a mean of 3.5, had the lowest rating, and white females with a mean of 4.5, had the highest. The overall difference was significant (F=11.613, df=5/798, $p<.001$) with some overlap between subgroups. Indian males rated the RN significantly lower than white females; Indian females rated the RN significantly higher than Indian males but significantly lower than white females; the mean rating of RN by Chicano females was significantly higher than Indian males and Indian females but significantly lower than the mean rating by white females. White males and Chicano males rated the RN significantly higher than did Indian males and significantly lower than white females but not significantly different from the ratings of Indian females or Chicano females. Clearly, both race and sex influenced students' perceptions of the amount of challenge associated with nursing careers; Indian males and Indian females rated it as significantly less challenging than did Chicano females or white females.

In comparing ratings of RN with own desired occupation on this subscale, only male and Indian categories had statistically significant ratings. No significant difference was found between the mean RN ratings of white students in Arizona (4.3) and white students in Pittsburgh (4.2).

Advancement Opportunities

This subscale was anchored on the extremes with the bipolar expressions "many opportunities for advancement" set at 5.0 and "few opportunities for advancement" set at 1.0. The ratings for each occupation obtained from this subscale are contained in tables 26, 27, and 28. Subgroup means for the occupations were as low as 1.3 and as high as 4.7, representing usage of about 85 percent of the total scale. Laundry worker received the lowest ratings, and medical doctor received the highest among all subgroups. The RN received moderately high ratings on this scale, being the second highest rated occupation in Tallahassee and Arizona.

In Pittsburgh, the four individual race/sex subgroups had statistically significant disparity in their means, with white males rating RN least rewarding (3.4), followed by black males (3.6), black females (3.9), and white females (3.9) ($F=6.255$, $df=3/641$, $p<.001$). Two homogeneous subsets were found, consisting of white males as one subset whose mean was significantly different from black females, and white females, the second subset. The mean rating of RN by black males was not significantly different from the means in either of the two subsets.

As would be expected from the above, the mean rating of RN by blacks (3.7) was not significantly different from the similar rating by whites (3.6), but the rating for males (3.5) was significantly lower than the 3.9 rating for females ($F=13.343$, $df=1/644$, $p<.01$). With the exception of white females, all other subgroups rated their own desired occupations significantly higher than RN on this particular subscale.

In Tallahassee, the overall difference between the mean ratings of RN on this subscale by black males (3.8), black females (4.0), white males (3.6), and white females (3.7) was not significant. With the exception of black females, whose ratings of RN (4.0) and own desired occupation (4.1) were not significantly different, each subgroup mean for own desired occupation was significantly higher than similar RN ratings.

The analytic procedures utilized to determine whether students in Tallahassee rated RN's significantly different on the advancement opportunity subscales from their counterparts in Pittsburgh revealed no significant differences between ratings of any student subgroup in either site.

In Arizona, the mean RN ratings between the race/sex subgroups were 3.7 for Indian males and Indian females, 3.9 for Chicano males, 4.1 for Chicano females, 3.6 for white males, and 3.8 for white females. Four homogeneously different subsets of means were found with the mean by (a) Indian males, as the lowest, significantly lower than the mean by (b) Indian females, which was significantly lower than the mean by (c) Chicano females, which was significantly lower than the mean by (d) white females. Neither the RN mean by white males nor that of Chicano males was significantly different from that by Indian females (homogeneous subset two) or Chicano females (homogeneous subset three).

Generally, students thought their own careers would offer more advancement opportunities than RN careers. The differences between the mean ratings of RN and OWN were significant for each subgroup except Indian males, Indian females, Chicano females, white females, and total Chicanos.

The mean RN rating by white students in Arizona (3.7) was not significantly different from the similar mean by white students in Pittsburgh (3.6). No significant differences obtained between any of the three sites.

Work Hours

This subscale was anchored with the bipolar expressions "good working hours" set at 5.0 and "poor working hours" set at 1.0. The means generated by this subscale for the various subgroups are presented in tables 29, 30, and 31. None of the occupations was rated as having extremely "bad" or extremely "good" work hours. A very constricted range in scale usage characterized the response to this item. Subgroup means ranged from 2.2 to 4.3, which was just slightly in excess of 50 percent of the scale.

In Pittsburgh, the mean RN ratings for the four race/sex subgroups were: 2.6 (white males), 2.7 (white females), 3.1 (black males), and 3.2 (black females). The overall F between these means was significant (F=9.835, df=3/641, $p<.001$). Two homogeneous subsets of means emerged composed of white males and white females in one subset, which was significantly different from black males and black females in the second subset. A one-way analysis of variance between race and sex groups further indicated that, within race, males and females did not rate RN significantly different from each other.

All the differences between the means for RN and own desired occupation on this subscale were negative and significant beyond the .01 level, indicating that all students, regardless of sex or race, thought the work hours associated with registered nursing were substantially less desirable than those associated with their desired occupations.

In Tallahassee, the one-way analysis of variance performed between the mean RN ratings by black males (3.3), black females (3.5), white males (2.4), and white females (2.2) was significant where the ratings of white males and white females were not significantly different from each other, but both of these were significantly different from similar RN ratings by black males and black females, clearly indicating racial but not sexual differences.

Each subgroup rated their own desired occupation as having better work hours than those of an RN. The differences between mean ratings of OWN and RN were all negative and significant.

White students in Tallahassee rated nurses significantly lower on the work hours subscales than did their white counterparts in Pittsburgh; however, the mean ratings of RN by black students in Tallahassee were not significantly different from similar ratings of RN by black students in Pittsburgh.

In Arizona, RN means varied considerably between the six race/sex subgroups. White males had the lowest (2.6), followed by white females (2.7), Chicano males (2.9), Chicano females (3.2), Indian males (3.7), and Indian females (4.0). Analyses revealed strong race differences (F=86.918, df=802, $p<.001$), where white students (2.6) rated RN significantly lower than did Chicanos (3.0) who, in turn, rated RN significantly lower than Indians (3.9). Sex differences, although significant, were not as substantial as those found between race groups.

The ratings of own desired occupations were higher than similar RN ratings for each subgroup, and all differences were significant at or beyond the .01 level of confidence.

No significant differences obtained between RN means of Pittsburgh and Arizona white students.

Differences between total sites also obtained. Collectively students in Tallahassee rated RN significantly lower (2.7) than did students in Pittsburgh (2.9). Students in Arizona rated RN significantly higher (3.4) than did students in Pittsburgh or Tallahasee.

Self-Supervision

The subscale utilized the expressions "chance to supervise self" (5.0) and "no chance to supervise self" (1.0). Subgroup means ranged from 2.6 to 4.1, utilizing just 1.5 scale points or only 37.5 percent of the available range. Although all subgroups agreed that the medical doctor had more flexibility with regard to self-supervision and that high school teacher came next in that regard, no clear consensus was observed as to what occupation had the least amount of self-supervision. Also, the subgroups varied from site to site. Perhaps the best summary comment is that there was no consistent attitude toward self-supervision across sites and within subgroups that discriminated between the professions other than that the medical doctor has a reasonable amount of it and everyone else had some of it to a lesser degree. It could very well be that high school students either do not understand the implications of self-supervision or do not value it, or both. This may be true even though they rated their own desired occupation high in supervision. That is, they don't know if it is good or necessary, but they are sure their job will have it.

In Pittsburgh, the RN received mean ratings of 2.9, 3.1, 3.2, and 3.5 from white males, black males, white females, and black females, respectively. A significant difference between these four subgroup means obtained ($F=7.788$, $df=3/641$, $p<.01$), with the Duncan's Multiple Range procedure showing three homogeneous subsets of means, all of which were significantly different from each other: (a) white males, (b) black males and white females, and (c) black females.

All students rated RN as having significantly fewer chances for self-supervision than they think they would have in their own desired occupations.

In Tallahassee, white males rated RN lower than any other race/sex subgroup (2.8), followed by white females (3.1), black males (3.3), and black females (3.5). The difference between these four subgroup means was significant ($F=9.330$, $df=3/613$, $p<.001$) and three homogeneous subsets of means from lowest to highest were: (a) white males who rated RN significantly lower than (b) white females who rated RN significantly lower than (c) black males and black females who were not significantly different from each other. In effect, although the means for RN by black students and white students were well within the neutral range, black students thought nurses had significantly more opportunities for self-supervision than did white students.

The mean ratings for own desired occupation with regard to self-supervision were high for all subgroups. The mean differences between ratings of RN and similar ratings of students' own desired occupations were all negative and significant.

The comparative analysis performed for subgroups between Pittsburgh and Tallahassee revealed no significant difference in the ratings of RN between race or sex groups between the two sites.

In Arizona, the differences between the means of race groups ($F=10.582$, $df=3/802$, $p<.001$) and sex groups ($F=14.795$, $df=1/803$, $p<.001$) were both significant. Regardless of race or sex, student subgroups rated their own careers as having significantly more self-supervision than RN careers. No significant difference obtained between the RN means of Phoenix white students and the white students at the other two sites.

Work Difficulty

This subscale was anchored with the expressions "easy work" (5.0) and "hard work" (1.0), with the scale assignments being arbitrary. The mean ratings of each target occupation are presentend in tables 35, 36, and 37 for the various subgroups, along with the mean differences between RN and students' own desired occupations. None of the target occupations was rated on the "easy" side of the scale. Only 60 percent of the scale was used. and the ordering of occupations along this subscale for most subgroups was the inverse of that found on other subscales (e.g., financial reward and occupational status).

As a side note, it can be observed that students did not seem to think that the work they have chosen for themselves will be easy. Either they think that "hard work" is the sign of a good job, or these results stand in contrast to those found on the financial reward, personal reward, and other subscales, where OWN was given ratings at the more acceptable extremes.

In Pittsburgh, the ratings of RN were quite similar among three of the four race/sex subgroups, with white females giving it the lowest rating (1.8), followed by black females (2.1), white males (2.2), and black males (2.3). A Duncan's Multiple Range Test showed that the RN mean for white females was significantly lower than RN means for the other three race/sex subgroups.

Neither black males nor white males thought the work performed by RN would be more difficult than their own desired occupations, but both black and white females did.

White females perceived nursing as being more difficult (1.7) than did any other subgroup. White males and black females rated RN's at 2.3, and black males at 2.4. The difference between the four subgroup means was significant (F=16.102, df=3/613, $p<.001$) where the means by black males, black females, and white males were not significantly different from each other, but all were significantly different from the mean of white females.

Again at this site, the mean ratings for the difficulty associated with the students' own desired occupations were generally low (i.e., students thought their own careers would be difficult), ranging between 2.0 and 3.0. The differences between the means of RN and own desired occupation were significant for black females and white females, but not for black males or white males.

The overall mean ratings for white students in Tallahassee and Pittsburgh were not significantly different from each other, nor were the mean ratings for blacks in Tallahassee and blacks in Pittsburgh significantly different. No differences were found between the mean ratings of RN for either of the two sex groups.

In Arizona, some variation in the mean ratings of RN was observed between the race/sex subgroups. White females (1.6) perceived RN as the most difficult, while Indian males (2.5) perceived it as the least difficult. The pattern emerging from these six means suggests that sex, as well as race, influence perception of RN on this subscale. The means of Indian males (2.5) and Indian females (2.4) were not significantly different from each other, but both were significantly higher than similar ratings by white females (1.6), Chicano females (2.0), and white males (2.1). The means of Chicano females and white males were not significantly different from each other; however, both were significantly higher than the mean by white females. Chicano males (2.4) differed significantly from both white females and Chicano females, but not from any other race/sex subgroup.

Between race subgroups, the RN mean by Chicanos (2.2) was significantly lower than the similar rating by Indians (2.5). Clearly, the difference between Indians and whites was both significant and substantial (.6 scale points) and less than the difference between Chicanos and Indians or Chicanos and whites. Males

(2.4) perceived RN to be significantly less difficult than did females (2.1) (F=11.908, df=1/803, $p<.001$).

On work difficulty subscales reported above (i.e., Pittsburgh and Tallahassee), the general trend was observed where males did not think that the work associated with RN was significantly more difficult than the work associated with their own occupations, but females did; this same trend obtained in Arizona.

No significant differences between RN means by Arizona, Pittsburgh or Tallahassee white students were observed.

Desire to Enter

The desire to enter subscale was anchored with the bipolar expressions "I have a strong desire to enter this profession" (5.0) and "I have no desire to enter this profession" (1.0). The means for each occupation for the desire to enter subscale are presented in tables 38, 39, and 40 for each of the subgroups. None of the five target occupations were rated very high, with only three of the seventy subgroup occupation combinations generating means above the midpoint of the scale. Laundry worker was rated by all subgroups as the occupation they have the least desire to enter. Males of all racial groups rated the medical doctor and high school teacher higher than RN and secretary. Only white females in Tallahassee failed to rate RN higher than high school teacher, and only Indian females rated RN higher than secretary.

In Pittsburgh, RN was rated 1.3 by white males, 1.7 by black males, 2.1 by black females, and 2.2 by white females. A one-way analysis of variance between these four means was significant (F=19.697, df=3/641, $p<.001$), and, according to a Duncan's Multiple Range Test, the mean for white males was significantly different from those by black males, black females, and white females. None of the latter three subgroup means were significantly different from each other.

It should be pointed out that while significant differences were found between race and sex subgroups' mean ratings of RN on the desire to enter subscale, the fact that all mean scores were low tends to make between-mean differences of little practical importance. This point finds more explicit expression in the difference between the means of RN and own desired occupation, where students rated their own desired occupations extremely high. Given the low mean scores for RN, all differences between OWN and RN were significant far beyond the .01 level.

In Tallahassee, females, regardless of race, had higher mean RN ratings than did males. RN ratings were: 1.3 for white males, 1.7

for black males, 2.2 for white females, and 2.5 for black females. The overall F statistic was significant ($F=27.688$, $df=3/613$, $p<.001$). The mean rating by white males was significantly lower than the means by black males, and both were significantly lower than the means by white females and black females. Although both race and sex differences were significant, the Multiple Range Test suggested that sex was a more important determinant of desire to enter nursing than was race, although both ratings were low.

As would be expected, the mean ratings for own desired occupations were extremely high for all subgroups. Between sites, comparative analyses showed that students in Pittsburgh and Tallahassee were not significantly different from each other in their ratings of RN on the desire to enter subscales for race or sex subgroups.

In Arizona, substantial differences obtained between means of RN for the six race/sex subgroups. Indian females (3.3) had a stronger desire to pursue RN careers than did any other subgroup, and white males (1.4) had the least desire. The differences between these means were highly significant. The means for Chicano females (2.7), Indian males (2.3), and white females (2.4), while not significantly different from each other, were significantly lower than the similar ratings by Indian females and significantly higher than the rating by white males.

Between racial subgroups, the RN mean by Indians (2.8) was the highest and significantly different from the similar ratings by Chicanos (2.2). The mean of Chicanos was significantly higher than that by whites (1.9). Total males (1.9) had significantly less desire to pursue RN careers than total females (2.9).

Differences between the mean ratings given to RN and those given to OWN were all negative (i.e., with OWN rated higher than RN) and highly significant.

No significant differences were observed between mean RN ratings by Pittsburgh, Tallahassee, and Arizona white students, nor were any differences observed between total group RN ratings among the three sites.

Job Desirability Summary

On all but four subscales (i.e., sex-relatedness, work hours, work difficulty, and desire to enter), senior students rated the laundry worker consistently low (below 2.5) and rated all other occupations at or above 3.0. Students utilized over 75 percent of the total scale to discriminate between occupations on 8 of the 12 subscales and, for the most part, tended to agree on the rank order of occupations on all subscales. That students so consistently between and across sites discriminated between occupations minimizes the possibility that they did not seriously engage the semantic differential task.

Although we pointed out throughout the above text that there were significant differences between groups, most of those differences were of research rather than practical value. That there were a few tenths of scale points separating the various race/sex subgroups is less important than that almost always all race/sex subgroups generally positioned themselves at about the same place on the overall scale.

If we consider mean scores between 2.6 and 3.5 as neutral, those below this range as low, and those above it as high, we find that the RN was generally perceived as a desirable occupation. That is, all subgroups of students thought RN was a financially and personally rewarding career which was high in status. The work nurses do was generally perceived as enjoyable, with opportunities to advance. It was considered to be a challenging career, although dominated primarily by females. Some of that career field's less desirable features (where ratings clustered around the "neutral" point) were its work hours and amount of self-supervision. The least desirable attributes of that career field were the amount of education required to become a nurse (more than students desired) and the difficulty of the work. *In spite of this generally favorable attitude, however, students did not want to become nurses.*

Some sex and race group differences were found. With the exception of work hours, race differences were confounded with, and primarily due to, sex differences. Sex differences between mean ratings of RN were highly significant on all but two subscales (i.e., sex-relatedness and work hours).

Relative to their own desired occupations, nursing does not appear, at least on the scales which were used in this survey, to be an attractive career to students. It might appear that several inconsistencies obtained in students' ratings of their own occupations. For example, they rated their own occupational choices as requiring *less* education than either an RN or MD, but rated their own occupations *more* financially rewarding than the RN and almost as much as the MD. From a logical standpoint, the students seemed to perceive the rewards inconsistently with what is generally known to be true (i.e., amount of education is positively correlated with financial rewards and status). An equally plausible explanation of these apparent inconsistencies, however, is that they result not from illogical thinking but rather from psychological thinking. The unusually high ratings students assigned to their own occupations might very well indicate a "halo" effect. Students operating under such a halo might be unwilling to assign anything but very high ratings to occupations of their own choosing. In making such high ratings of their occupational choices, the students may have been indicating the importance of these occupational attributes to them rather than indicating their realistic expectancies. In the next section we will examine more clearly some aspects of students' occupational choices as reflected on the semantic differential scales.

Occupational Choice

As part of the semantic differential format, students were asked to indicate the occupation which they desired for themselves before rating it on the 12 semantic subscales. They were asked to indicate their desired occupation in two other places on the instrument as a check for consistency of response. Of those who gave responses, approximately 92 percent gave identical responses to each question. The results presented are based on responses obtained using the students' own desired occupations as a sixth target occupation in the semantic differential format. A few students (about 3 percent of the total group) did not make a specific occupational decision. They were asked to write "undecided" as their occupational choice and rate each subscale according to their "ideal" occupation. Because this question was based on an extremely wide variety of occupational choices, the responses obtained were considerably varied. To facilitate analysis, several broad occupational categories were generated within which responses could be classified using the *Occupational Outlook Handbook* (1972–73 edition) as a guide. These categories were:

1. *Professional I.* Any occupation that normally required 4 years of undergraduate study plus additional training at the graduate or equivalent level as a minimum was placed in this category. Examples of occupations included in this category were: psychologist, lawyer, college professor, physicist, etc.
2. *Professional II.* This category included those occupations which have a minimal educational requirement of 4 years of undergraduate study or its equivalent and is exemplified by such occupations as: elementary or high school teacher, medical technologist, engineer, journalist, etc.
3. *Technical.* Occupations grouped under this category are

those which require specialized preparation in a technical or associate arts program but not necessarily 4 years of formal undergraduate education. Occupations which exemplify this category include: computer programmer, draftsman, airline host or hostess, and barber.

4. *Managerial.* All occupations related to business that require organizing and coordinating skills in some organizations or establishment were categorized as managerial. Some examples are: personnel manager, sales representative, marketing, office manager, company executive, and purchasing agent.
5. *Skilled craftsman.* Occupations related to skilled trades (e.g., steam fitters, stonemasons, roofers, sheet-metal workers, plumbers, etc.) and normally require some period of apprenticeship and/or union membership were classified under this category.
6. *Laborer.* Both skilled (i.e., nonapprenticeship and nonunion) and semiskilled jobs were included under this classification. These jobs included: auto mechanic, construction worker, garbage collector, waitress, and janitor.
7. *Clerical.* This category included all occupations requiring secretarial or other clerical skills such as filing, typing, stenography, etc. Some examples are: secretary, bank teller, file clerk, telephone operator, receptionist, and cashier.
8. *Civil servant.* Students who indicated they wanted to be policemen, firemen, postal workers, or join the military service were classified under this category. Also included were jobs listed under State and Federal Government agencies (e.g., correction officer, probation officer, etc.).
9. *Nursing.* In cases where students indicated a desire to enter some field of nursing, these responses (e.g., nurse, registered nurse, or special nurses such as pediatric nurse) were grouped together to form this category.
10. *Other health professions.* Health-related occupations other than nursing were included in this category. No restrictions were placed on the education required to achieve these occupations or the level of jobs in this category. Consequently, it contains positions which vary considerably (e.g., medical doctor, X-ray technician, physical therapist, etc.). This category was kept distinct to determine the proportion of students that were interested in health careers other than nursing.

Two additional categories were used to accommodate students who said they wanted to be *homemakers* (e.g., "married and raise a family") or *self-employed* (e.g., "have own business"). Responses such as "singer," "dancer," or sports-related careers (e.g,. baseball or football player) were classified as self-employed.

Tables 41, 42, and 43 depict the percentages of respondents desiring careers in each of the above categories in each site. There are some interesting inter- and intra-site differences. In Pittsburgh, the two racial groups parallel each other closely, but blacks seemed to choose both professional categories (particularly Professional II) with a greater frequency, while the white students chose clerical occupations more often than did blacks. As one would expect, sexual differences were profound, with Professional II and Clerical predominating the female choices and Professional I and Skilled Craftsman predominating the male selections. Only females chose nursing careers, and equally between the races. Other health careers were chosen equally between the sexes, but predominantly by blacks.

In Tallahassee, there were more distinct racial differences in two major categories: a much larger proportion of whites chose Professional I than did blacks, and a much larger proportion of blacks chose Clerical. Sexual differences showed the same pattern as in Pittsburgh, with males choosing Professional I and Skilled Craftsman as their two most frequent categories, while females again chose Professional II and Clerical as their two most frequent categories. Again, only females chose Nursing, equally divided between the races, but whites and females predominated in the selection of Other Health Careers (In fact, no black males chose this category.). The undecided category was almost four times the size of that group in Pittsburgh survey, becoming in Tallahassee a major category.

Arizona responses were somewhat different than in the previous two sites in that all three racial groups had males choosing Skilled Craftsman as a very predominant choice (approximately half of all Indians and one-third of the Chicanos and whites). The second most popular response for Chicano and white males was Civil Servant, there not really being a second popular response for Indians. The two professional categories had low choice levels. Again, Clerical and Professional II choices predominated the Chicano and white female choices, while the Indian females chose Clerical and RN. RN was a popular choice among Arizona females, with equal proportions of whites and Chicanos choosing that field and over twice as many Indian females choosing the field. No males chose that field. Other health fields were chosen twice as often by females as by males and were most popular to Chicanos, with whites choosing those career fields somewhat less, and Indians making that choice infrequently.

Table 44 aggregates these comparisons across the three sites, depicting more vividly the contrasts that have been described. The lower aspirations for professionalism in Arizona are also evident in the white, Indian, and Chicano populations making up that site. There is an equal degree of interest in professionalism among the sexes, with females opting predominantly for the lower level of professionalism, while males opted for the higher levels. It is also evident that if these classes characterize those that will follow them in their respective sites, we should predict that Arizona, Tallahassee, and Pittsburgh, in that order, should be the most susceptible to a good recruiting program, that the Indian, Chicano, and black, in that order, represent the best targets, and that males will constitute only a fourth of the program.

Admission Requirements for Schools of Nursing

To determine student awareness of the high school courses and the other requirements most needed for admission to schools of nursing, students were asked to select from a list of course and noncourse requirements those they thought were most essential for admission to several schools. For this item, nursing schools were imbedded among junior and 4-year colleges and vocational/technical schools. The students were to choose among algebra, biology, business math, calculus, chemistry, English, foreign languages, social studies, shorthand, shop courses, typing, and "no course requirement" categories for the course requirement item, and among guidance/placement test, high school transcripts, NLN test, teacher recommendations, upper 50 percent of class, college board exams, and "no other requirements" categories for the additional requirements item.

Several sources were used to determine the current requirements for 4-year baccalaureate, 3-year diploma, and 2-year associate degree nursing programs to compare these with student responses. The majority of these three types of schools required students to have algebra, chemistry, biology (course requirements) and high school transcripts and college board examinations (noncourse requirements). The NLN Examination was not generally required for 4-year colleges or A.D. programs but was, however, required for the majority of diploma schools of nursing. In addition, many diploma schools required that students be in the upper third of their graduating class. Two years of a foreign language was required by the majority of 4-year programs and was suggested but not required for A.D. and diploma programs.

During the first administration of the instrument, the NLN test received an extremely high proportion of selections, and this was believed to be due to its "face validity" (i.e., it had nursing exam for part of its title). Therefore, for the administrations in the remaining sites, a fictitious exam was included to test this face validity hypothesis.

The major results across all three sites are presented in table 45. For economy of presentation, only the three most frequently chosen relevant courses (of the less relevant courses, only English was chosen more frequently than algebra—45 percent of the time in Pittsburgh, 36 percent in Tallahassee, and 43 percent in Arizona), and the four most frequently chosen noncourse requirements are shown and only for schools of nursing.

From these data we can see that Pittsburgh had an edge over Tallahassee in students' knowledge of courses required for nursing school, with Arizona students trailing the Tallahassee students by a similar margin. All three sites were deficient in students' knowledge of the need for algebra. It can also be seen that this deficiency is manifest among all of Arizona's three racial groups, although somewhat less evident among its white students.[1] Although less pronounced, similar deficiencies were noted among black students in Pittsburgh and Tallahassee. Also, as would be expected from alignment with interests, males were more deficient in their knowledge of nursing school course requirements than were females.

Some of the same differences as were found with course requirements were also found among the noncourse requirements. The Pittsburgh students had a much better idea of the necessity of transcripts and boards for entering nursing schools than was the case with the Tallahassee students, who were not much more knowledgeable than were the Arizona students. The knowledge differences between the two sexes were negligible as were the differences between blacks and whites. Black and white students were much more knowledgeable than were either the Indian or Chicano student groups.

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[1] When the term "deficiency" is applied in this report, it is done so in a relative sense. All students need not have this knowledge, and in some analyses not presented here, it was determined that students who wish to be nurses make better responses to these knowledge items than do students in general, and by a substantial amount. Also, as is evident from the data presented here, females are more knowledgeable than males about requirements for entering into training in this female-dominated field.

From their highly frequent choice of the fictitious ANA exam, it is obvious that it was chosen because of face validity. Its being chosen more frequently than the NLN test was probably either due to its having more face validity than the NLN or because it appeared earlier in the list. At any rate, it is doubtful if you asked students what exams were required to get into nursing school that many of them would volunteer the name of the NLN exam.

In summary, about three-fourths of all students know that chemistry and biology are required subjects for nursing school, while only one-fourth recognize the necessity of algebra. Females know the requirements more than males, whites better than blacks, and Chicanos and Indians know them poorly. No student groups seem to appreciate the value of high school boards or transcripts in getting accepted to nursing schools.

Median Estimated Starting Salaries of Occupations

As indicated previously, the occupations chosen for this survey were selected to achieve spread along the various survey scales. Since salary is one of the factors associated with the selection of occupational choice, it was desirable to assess students' perception of the salary of registered nurses in comparison with that made in other fields. Students were asked to select from a range of salary categories that which they thought persons in each of the rated occupations would make when they were just starting out in the field. In addition, they were also asked to indicate what starting salary they expected to earn in their own desired occupation. Tables 46, 47, and 48 provide the median salaries for each occupation at each site derived from this procedure.

In Pittsburg, median salary estimates for the total group ranged between $98 and $260, where, as expected, the medical doctor was perceived as earning the highest beginning salary ($236) and the laundry worker as earning the lowest salary ($103). The secretary was ranked second lowest ($152), the registered nurse second highest ($176), and the high school teacher ($175) was ranked in the middle by the total group. Several inversions occurred between the salary orderings of the registered nurse and the high school teacher between race and sex subgroups. Males of both racial groups rated RN higher than the high school teacher, while females rated the high school teacher higher than RN.

Except for the high school teacher, black students assigned higher starting salaries to occupations than did white students, and males assigned higher salaries than females.

The difference between the median RN and salary estimates of what they would make in their desired field are also shown in these tables. Observe that in Pittsburgh the largest discrepancy was for black males, who thought the weekly salary of RN was about $39 below what they would expect; white males thought it was $20 below; black females thought is was $6 above; and white females, $11 above their OWN expected salary. When adjusted in light of what nurses actually make (actual RN salary—OWN), only white females would have earned salaries lower (by $4) than RN, while black females would have earned $19 more, white males $40 more, and black males $58 more. It would probably be reasonable to say that students have a general idea of what relative salaries are made by the various fields. It is the salaries associated with their desired occupations that appear to be unrealistic.

In Tallahassee, black students thought that the laundry worker ($70) made less than did white students ($85) (table 47). No racial differences for the subgroups were found. Except for the $15 difference between the median salary estimates of laundry worker for males and females (the median given by males was $85, and the median by females was $70), no other sex differences were observed in salary estimates.

For students' own desired occupations, median salaries were found to be as high as those for the medical doctor, with slight variations above and below that amount depending on race or sex subgroups. The median salary expected was $200 per week for black and white students, but between sex groups the median desired salary for females was $185, compared to $220 for males. Males associated starting salaries of around $220 per week with their chosen fields whereas females ($185) associated lower starting salaries with their chosen fields.

Where the median desired starting salary was subtracted from the perceived starting salary of the RN, it can be seen that each subgroup desired considerably more money than they thought was made by an RN. For males, these differences were twice as great as they were for females (−$55 compared to $20). By subtracting the actual starting salary of an RN from students' own desired starting salaries, the dollar difference between what an RN actually makes and what students generally associate with their chosen fields (where RN is always lower) ranges between $39 and $74.

In Arizona (table 48), the median salary estimate for laundry worker was $85 by Indians and whites, but only $70 by Chicanos. The lowest median salary estimate for secretary was $125, given by white students, followed by $145 given by Chicanos and $165 by Indians. The median starting salaries given by Indians for the high school teacher ($165), RN ($185), and medical doctor ($220) were higher than similar ratings by Chicanos and whites, where these latter two racial groups had equal medians for the high school teacher ($145), the RN ($165), and medical doctor ($200). With the exception of laundry worker, the median estimated starting salaries of all occupations were higher for Indians than were similar ratings by Chicanos or whites.

Between sex groups, males gave higher salary estimates for the laundry worker, high school teacher, and medical doctor than did females. Both males and females estimated the starting salary of the secretary as $145 and the RN as $165. There appeared to be slightly more agreement among Indian males and Indian females with regard to salary estimates than between Chicano males and females and white males and females. With the exception of the laundry worker, where Indian males rated it higher than did Indian females, all other median salary estimates for occupations were the same for both Indian males and Indian females. Chicano males rated the laundry worker, high school teacher, and medical doctor higher than Chicano females, and white males rated the laundry worker, secretary, and medical doctor higher than did white females.

Although males tended to rate some occupations higher than females (i.e., laundry worker, high school teacher, and medical doctor), differences between racial groups seemed to be more pronounced. Overall, Indians assigned higher beginning salaries to occupations than did Chicanos or whites. With the exception of laundry worker and secretary, white and Chicano students gave similar estimates for each occupation.

The median salary estimates for the RN ranged between $165 and $185 with clear racial variations. Indian males and Indian females thought the beginning salary for an RN was $185, whereas all other race and sex subgroups thought it was about $165.

Median salary estimates for own desired occupation varied considerably.The lowest was $145, and the highest was $200. As was expected, males ($200) expected to earn considerably more than females ($165), a difference of approximately $35. Although this same trend was observed between sex groups within each race (i.e., males expecting higher starting salaries than females), Indians as a group ($200) expected to earn more than Chicanos ($185) or whites ($165). Indian females ($185) expected to earn more than Chicano females ($145) or white females ($145). Indian males and Chicano males expected to earn approximately $200;

however, both groups expected to earn substantially more than white males ($185).

In looking at the dollar differences between the median estimated starting salary of RN and the median estimated starting salary of own desired occupation, no substantial differences obtained for white students; RN was $15 below OWN for Indians and $20 below OWN for Chicanos. Total males rated their own desired occupations $35 above what they thought RN's made, but females rated their OWN and RN the same. Both Chicano and white females thought that RN's made $20 more than what they would make in their own chosen field. When adjusted in light of what nurses actually made and what students said they would make in their chosen fields, only Chicano females and white females would earn less than the actual starting salary of RN (+$13 for each). All other salary estimates for own desired occupation were above what nurses actually made. These differences were quite substantial for Indian males and Chicano males ($42 difference), as well as Indian females and white males ($27 difference).

Most Frequently Performed Nursing Tasks

For the Pittsburgh instrument, 35 nursing tasks which included *health care, custodial, interpersonal, professional, administrative,* and *supervisory* type functions were generated from a variety of sources. Students were asked to select the *five* tasks they thought hospital duty nurses spent most of their time doing. These choices were tallied, and response percentages of students selecting each task were computed.

In addition to the most frequently performed task ratings, students were also asked to rate the same 35 tasks on a scale indicating the degree of pleasantness they associated with each task. Mean pleasantness scores were derived for each task by weighting the degree of pleasantness categories and computing a weighted arithmetical mean, dropping the decimals. The potential range of the mean pleasantness ratings between −100 (a highly unpleasant task) and +100 (a highly pleasant task), with zero representing tasks with neutral pleasantness. In the actual ratings, however, the scores ranged between +87 to −69. Table 49 gives the percentages of the frequencies with which the tasks were chosen by race and sex subgroups, and table 50 gives the pleasantness ratings found for those same tasks for the same subgroups.

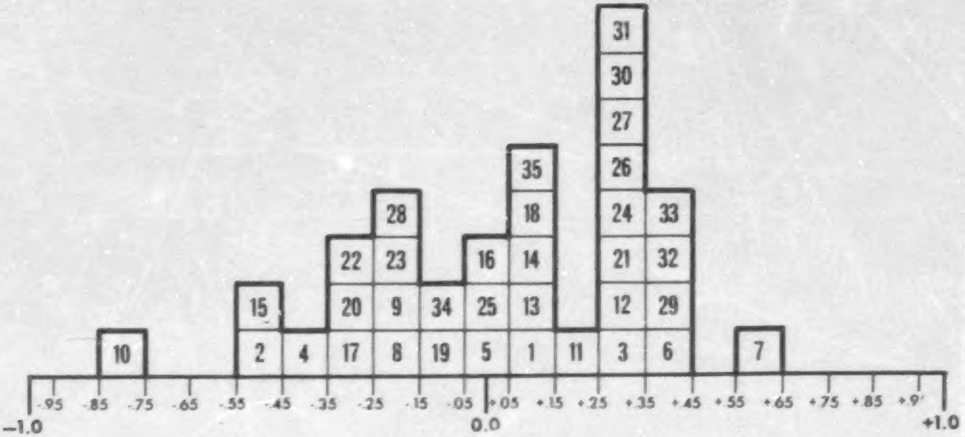
The data indicate that students possess fairly strong stereotypic perceptions of nursing tasks, since the response percentages begin to decline rapidly after the sixth task.

Not only did students select relatively few of the 35 tasks as those most frequently performed; rank-order correlations between subgroup rankings of tasks showed that considerable agreement existed between subgroups, with more agreement between males and females (Rho=.98) than between blacks and whites (Rho= .62).

In order to provide the reader with some sense of how students distributed task pleasantness ratings over the total scale, figures 1 and 2 show histograms of mean pleasantness scores for males and females. The distributions for black and white students are not presented here because they were not dissimilar from those shown. The distributions of mean pleasantness scores are multimodal for males and females, but females skewed their ratings a little more toward the pleasantness end of the scale, as well as having a higher degree of dispersion to their ratings than did males. Two important results are evident from the histograms in figures 1 and 2. First, students were able to make clear evaluative discriminations between nursing tasks. Some were rated extremely positive, while others were rated extremely negative by each subgroup. Secondly, females generally rated nursing tasks more extremely than males. Because of these observed sex differences, the mean pleasantness ratings of the five most frequently checked tasks presented in table 50 were broken down by race and sex groups and are presented in table 51, along with an average pleasantness rating over the five most frequently checked tasks. The differences between the pleasantness ratings for males and females were substantial and significant where females rated tasks more pleasantly than males. Differences between the ratings of black and white students were minimal and, with the exception of "keep patient progress records," insignificant.

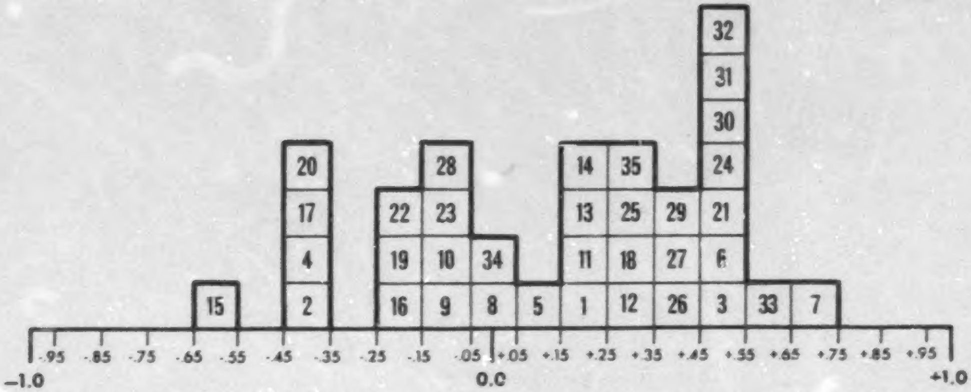
Because the Pittsburgh students responded with stereotyped versions of nursing tasks and that these stereotypes included a heavy weighting of low-level health care tasks (giving shots, taking temperatures, and taking blood pressures were among the five most fequently chosen tasks), the nursing task list was expanded to include higher level health care tasks. Twenty-nine of the tasks were common with the thirty-five-task Pittsburgh list, and seven tasks were added, yielding a thirty-six task list. As can be seen from table 52, which gives the percentage of students who selected each task in Talahassee, no change in the stereotype occurred as a function of this modification. Again the similarity in ratings between racial and sexual subgroups in evident.

Figure 1.—Distribution of mean pleasantness ratings (Pittsburgh males)



1. Attend professional conferences
2. Bathe patients
3. Chart patients' progress records
4. Collect specimens
5. Comfort patients' families
6. Conduct research
7. Discharge patients
8. Dress patients
9. Dress surgical wounds
10. Empty bedpans
11. Examine eyes
12. Explain nursing procedures to relatives
13. Feed patients
14. Give back rubs
15. Give enemas
16. Give shots
17. Inspect open wounds
18. Interpret medical treatment to patients
19. Irrigate eyes and ears
20. Irrigate wounds
21. Keep patients' records
22. Keep ward clean
23. Make beds
24. Plan nursing care with families
25. Position patients in beds, chairs, etc.
26. Record diagnostic tests
27. Schedule patients for routine tests
28. Supervise duties of janitorial staff
29. Supervise nurses' aides
30. Take blood pressure
31. Take patients' medical histories
32. Take temperatures
33. Teach nursing students and aides
34. Turn patients
35. Weigh patients

Figure 2.—Distribution of mean pleasantness ratings (Pittsburgh females)



1. Attend professional conferences
2. Bathe patients
3. Chart patients' progress records
4. Collect specimens
5. Comfort patients' families
6. Conduct research
7. Discharge patients
8. Dress patients
9. Dress surgical wounds
10. Empty bedpans
11. Examine eyes
12. Explain nursing procedures to relatives
13. Feed patients
14. Give back rubs
15. Give enemas
16. Give shots
17. Inspect open wounds
18. Interpret medical treatment to patients
19. Irrigate eyes and ears
20. Irrigate wounds
21. Keep patients' records
22. Keep ward clean
23. Make beds
24. Plan nursing care with families
25. Position patients in beds, chairs, etc.
26. Record diagnostic tests
27. Schedule patients for routine tests
28. Supervise duties of janitorial staff
29. Supervise nurses' aides
30. Take blood pressure
31. Take patients' medical histories
32. Take temperatures
33. Teach nursing students and aides
34. Turn patients
35. Weigh patients

In addition to these frequency ratings, students were again asked to rate each task on a scale indicating the degree of pleasantness they associated with each. Table 53 gives the pleasantness ratings found for tasks rated by each major subgroup in Tallahassee; a positive sign indicates a pleasant task and a negative sign indicates a negative or undesirable task. The distribution of mean pleasantness scores varied between race and sex subgroups, and consequently, some differences were observed in the mean ratings of each task between the subgroups. All mean differences in pleasantness ratings presented in this section were employed by two-tailed t-tests.

To provide a meaningful basis of interpretation, an attempt was made to identify those tasks hospital duty nurses actually performed in their daily activities. A sample of 49 nurses with no fewer than 2 years of experience as general hospital duty nurses in medical/surgical services was drawn from 3 Pittsburgh area general hospitals. The criteria used in selecting these nurses were: (a) that they had sufficient exposure to hospital duty nurses' tasks (b) that their knowledge of hospital duty nursing tasks was current; (c) that they had no other types of nursing employment (so that all of their responses were not confounded with tasks related to other settings); (d) that they had no experience as supervisors (so that they would not confound their responses with supervisory tasks); and (e) that they represent all three types of nurse training programs (i.e., B.S., A.D., and diploma). In meeting these criteria, the nurses selected ranged in age from 21 to 30 years, with a median age of 24. Twenty-nine had been trained in diploma programs, and ten each had been trained in baccalaureate and A.D. programs. Approximately one-half had had 2 years or fewer of employed hospital duty nurse experience beyond their exposure during their nurses' training. The remaining half had 3 to 7 years employed hospital duty nurses experience. None had had any supervisory experience.

The nurses in this sample were asked to respond to a modified version of the student survey instrument to obtain criterial data against which to measure the accuracy of student responses. The responses obtained from these hospital duty nurses for the five tasks they most frequently performed are presented in table 55. Although the consensus (percentage of nurses checking each task) was not high, the majority indicated that they administer medications, chart progress records, interpret medical treatments to patients, discuss nursing care with doctor, and plan nursing care with the family. With the exception of "administer medication," the tasks nurses said they actually performed were different from those that the students thought nurses performed. Comparing the mean pleasantness ratings given by Tallahassee student subgroups for the tasks nurses *said* they performed (table 55) reveals that students perceived them much more positively than they did those that they *thought* nurses performed. Black students rated the actual tasks performed by hospital duty nurses more positively than whites, and females rated them more positively than males. It seems likely, then, that given accurate information of what nurses actually do, students in each race and sex subgroup might have a more positive perception of nursing careers.

Table 56 provides the percentage of respondents in each Arizona subgroup that selected the tasks they thought nurses most frequently perform. Again, that students generally held stereotypic notions of what nurses do is evidenced by the relatively high percentage of respondents in each subgroup who checked the five most frequently chosen tasks. There was also considerable agreement among each respondent subgroup and with the other sites that nurses spend most of their time taking temperatures, giving shots, administering medication, taking blood pressures, and charting patient progress recods.

Table 57 gives the mean pleasantness scores for the five most frequently checked tasks for each subgroup. With the exception of "give shots," tasks were rated moderately high on the pleasantness scale. An average rating across the top five tasks for each subgroup in table 57 shows that white respondents rated these tasks less pleasantly than Chicanos or Indians. Within race groups, the average mean pleasantness ratings across the five tasks were about equal for Chicano males and Chicano females; however, the average rating by Indian males was less than the similar rating by Indian females, and the average rating by white males was less than the similar rating by white females.

Also given in table 57 are the five tasks nurses said they most frequently performed, along with the mean pleasantness scores each student subgroup gave to those tasks. Comparing the differences between the average mean pleasantness rating across the five tasks students *thought* nurses performed with their average rating across the five tasks nurses *said* they performed most frequently indicates that little differences would obtain in the way students evaluate the actual nursing tasks. The greatest amount of change was for white respondents, where the average rating of tasks they thought nurses performed most frequently was +13, compared with a rating of +21 given by them to tasks nurses actually said they performed most frequently. The reason why such differences were found in Tallahassee but not in Arizona may be due to the Tallahassee students rating the five most frequent tasks they selected as being much less pleasant in the first place, where the Arizona students rated their selections moderately pleasant, leaving much less room for improvement.

Table 58 gives the percentage of each subgroup across the three sites. The reader will observe that "administer medications" and "chart patient progress records" were selected by students and nurses alike. The reader should also note that the tasks "administer medication" and "assist in operating room" were not included on the Pittsburgh Survey. The most obvious conclusion that can be drawn from table 58 is that students, regardless of race, sex, or geographic region; held stereotypic perceptions of what it is that nurses do. Further, based on what nurses said they actually do, it seems clear that these stereotypes are erratic.

Table 59 provides the mean pleasantness ratings assigned by students to those tasks they thought nurses most frequently performed. Students across regions generally thought that administering medications, taking temperatures, taking blood pressures, and charting patient progress records were relatively pleasant tasks, while they thought giving shots, assisting in the operating room, collecting specimens, and dressing surgical wounds were undesirable tasks.

Academic Preparation for Nursing School

This section of the survey was included to determine whether, and by when, students were taking those courses (i.e., biology, chemistry, algebra) that would prepare them for admission to a nursing school. Students were asked to indicate from a list containing nine high school courses those they had already taken and successfully passed, and those they were currently taking (i.e., during their last year of high school). Tables 60, 61, and 62 contain percentages of the relevant courses taken, broken down by when they were taken and by race and sex subgroups. Given these data, it was possible to determine (a) the proportion of students who had taken the most frequently required courses *before* entering their senior year, (b) those who had taken them *during* their senior year, and (c) the total percentage of students who would have taken these courses by the time they had graduated from high school (i.e., the other two groups combined).

In Pittsburgh, the only racial difference was with a slightly smaller proportion of blacks taking chemistry. Among sexes, however, there were substantial differences with a larger proportion of males taking both algebra and chemistry. In Tallahassee, the racial differences were substantial, with only one-half of the blacks taking algebra and one-fifth of them taking chemistry. The only sexual difference was with fewer females taking chemistry. The sexual difference held for females of both races.

In Arizona the proportion of students who took each course was substantially lower than the proportion of students who took similar courses in Pittsburgh and Tallahassee. Indians were substantially better prepared in algebra and biology than were Chicanos or whites. No racial differences obtained for chemistry; less than 50 percent of each race subgroup had taken chemistry by the time of graduation. In all cases but one males were better prepared than were females across all races. The one exception was the higher proportion of female Chicanos who would have taken algebra by the time they had graduated.

For the most part, and at all three sites, those who had planned to take algebra and biology had already done so prior to entering into their final year in high school. From one-third to one-half of those who had planned to take chemistry by graduation were taking that course in their final year.

Demographic Information

This section of the survey instrument requested that respondents provide background information in five major categories: (1) family size (sex and placement of siblings relative to the respondent); (2) parental education and occupation; (3) amount of career counseling; (4) plans after high school; and (5) exposure to health models and health careers through volunteer work in hospitals and/or personal acquaintance with health professionals. These responses were crosstabulated with selected attitudinal measures of the RN to determine whether a discernible pattern obtained between the perception of nursing careers and these demographic variables. These variables are discussed below.

Family Size

Tables 63, 64, and 65 contain the distributions of the family sizes of respondents at the three sites. There were some definite differences between sites, as well as among racial groups. In Pittsburgh, there was no difference between blacks and whites, while in Tallahassee, black students as a group came from larger families. In Arizona, the Indian students came from the largest families, followed in order by the Chicano and white students. Since there were white groups at all three sites, they served as a control group. There were little differences between the white students at the three sites, with the exception of the Arizona white students at one extreme of the distribution. That is, in Arizona there were fewer students who came from very large families.

To determine whether family size was related to the perception of RN, an average RN score was derived from eight semantic differential subscales (i.e., amount of pay, personal reward, occupational status, occupational challenge, work enjoyableness, advancement opportunities, work hours, and work difficulty). These subscales were anchored such that 1.0 represented a low or negative evaluation, and 5.0 represented a high or positive evaluation. The ratings were summed across these eight subscales for each respondent and divided by eight, yielding an average RN rating for each respondent. Then, these average RN ratings were grouped into three categories: (a) *low* (ratings between 1.0 and 2.5); (b) *neutral* (ratings between 2.6 and 3.5); and (c) *high* (ratings at or above 3.6).

Two levels of family size (i.e., total number of siblings in the family) defined by *large* (three or more children) and *small* (two children or less) were crosstabulated with three levels of evaluative RN perception. No distinguishable pattern obtained between family size and the evaluation of nursing careers in any of the subgroups at any of the sites.

Parental Occupation and Education

Information concerning parental education and occupation was requested to provide an indicator of family socioeconomic status (SES). There are, of course, always problems associated with using SES indicators. For example, parents' occupation and education are two of the best SES indices, but students do not always know what their parents do or how much education they have. Even when they do know this information, frequently they tend to overstate these variables in their responses accordingly to a socially "desirable" or "undesirable" bias. The same occupational categories used previously to classify occupations were used in these analyses. This classification permitted the identification of two broad occupation groups composed of: (a) "white collar" occupations (i.e., professional I and II, technical, managerial, and RN); and (b) "blue collar" occupations (i.e., skilled craftsman, laborer, clerical, and agricultural). The inconsistency of this classificatory scheme is obvious; however, given the constraints described above, it was felt that this procedure provided the best possible analytic option for determining whether trends would obtain suggestive of possible relationships between SES factors and the perception of nurses.

In addition to the two levels of parental occupation, three levels of parental education were defined: (a) parents with 11 years or fewer; (b) those with 12 years; and (c) those with more than 12 years. These were termed *low, middle,* and *high,* respectively.

Each of these reconstructed variables for parental education and occupation was crosstabulated with *high, neutral,* and *low* RN perception groups to determine whether parental education and/or occupation patterned with respondents' perception of nurses.

The distributions of fathers' occupations can be found in tables 66, 67, and 68, from which it can be seen that there are some definite site differences. Pittsburgh and Arizona students have fathers with "blue collar" occupational profiles, while Tallahassee students' fathers have "white collar" profiles. Most of that profile is contributed to by the white students, as there were definite differences in the white and black students' responses. In Pittsburgh, such a racial difference was not found. Interestingly enough, large differences in the profiles between Indian, Chicano, and white students were not found at the Arizona site.

As was indicated previously, some caution must be exercised in dealing with these data. For example, there are two reasons why a difference in sex-linked profiles might occur. One is that for a given occupational category, it is more likely that an offspring of one sex would drop out of school than an offspring of the other sex. We have no specific knowledge of these types of social patterns within the communities where we collected the data and thus do not know whether any of the data reflect these patterns. The second reason is that one sex may feel a greater need to give "acceptable" answers about such things. Whichever is the reason in any of these cases, Indians manifested such differences in the laborer and civil servant categories, Tallahassee blacks and whites did so in the Professional II category (and in opposite directions, with the male blacks and the female whites predominating in that choice), Tallahassee blacks did so in the laborer category, and Pittsburgh blacks did so in the laborer and self-employed categories. Thus, at least one racial group demonstrated differences in fathers' occupational profile at each site for the category laborer, and it was always in the direction of males choosing the response with a high frequency.

Tables 69, 70, and 71 present similar distributions of mothers' occupations. In Pittsburgh, roughly two-thirds of the black students and slightly over one-half of the white students listed homemaker as their mothers' occupations. The only other category also checked with any high degree of frequency was civil servant. In Tallahassee, employment rates rose to from one-half to two-thirds of the mothers working, with professional II taking a second place in frequency to civil servant. A somewhat less clear pattern obtained in Tallahassee, but with "other health professional" taking a second place to civil servant. None of the response rates rose on this item, particularly in Pittsburgh, Tallahassee, and with female Indians in Arizona.

The students' fathers' education is described in tables 72, 73, and 74. There do not appear to be sexual or racial differences in Pittsburgh, but in Tallahassee the white students seem to have better educated fathers. The proportion of no responses among the black students is substantial, however, and although there is some reason to believe that the nonrespondents would not have changed the profiles, no definite conclusions along that line can be drawn.

In Arizona, there do not appear to be substantial differences between the educational levels of the fathers of Indians and Chicanos, but the white students do have better educated fathers. Again, the proportion of nonresponding Indians make any conclusions tentative at best.

The educational levels of the students' mothers are depicted in tables 75, 76, and 77. It can be seen that the description of the educational profiles of the fathers also hold for the mothers' educational levels, although nonresponse by the black Tallahassee students was not nearly as high as with their fathers' education.

Relationship of SES Attributes and Attitudes Toward Nursing

Although there are some difficulties in knowing the exact distribution of the educational and occupational indices of SES throughout the student populations surveyed, these inaccuracies probably are more likely to lead to missing actual relationships between SES and attitudes toward nursing than they are to generate relationships that don't exist. Thus the relationships described below are most likely valid. This is even more likely the case, since they paint a consistent picture of an inverse relationship between SES and positive attitudes toward nursing.

In Pittsburgh, both black and white females who classified their fathers in the low education group (i.e., 11 years or fewer) more frequently assigned higher ratings to the RN than respondents in those same subgroups who classified their fathers in the high education group. Females of both racial groups whose fathers were classified as "blue collar" workers more frequently had higher average RN ratings than respondents in those groups whose fathers were classified in the "white collar" category.

In Tallahassee, both white female respondents and white male respondents who classified their mothers' education as low (11 years or fewer education) more frequently had high RN ratings (i.e., ratings between 3.6 and 5.0) than students in those subgroups who classified their mothers' education as middle or high. No distinguishable relationship obtained between parental education or occupation and evaluative RN perception for the other subgroups.

In Arizona, no significant relationship obtained between fathers' education and the rating of RN. There was a definite relationship, however, between mothers' education and the evaluative rating of RN for total whites and white males. Within those subgroups, students who classified their mothers' occupation as low more frequently gave higher ratings to RN than students in those same subgroups whose mothers' education was classified as middle or high. A significant pattern obtained between fathers' occupation and the perception of RN for Indian males and Indian females. Indian females and total Indians whose fathers were classified as "blue collar" workers assigned significantly higher ratings to RN than students in those same subgroups whose fathers were classified as "white collar" workers. No other significant patterns were found between parental education and occupational measures and measures of evaluative perceptions for RN.

Post-High School Plans

A number of questions were directed at determining what the respondents' post-high school plans were. Tables 78, 79, and 80 present the students' feelings about the amount of financial demands that will be made on them. In Pittsburgh, there was a slightly greater need felt by the black students to be responsible for greater amounts of their own financial support. The pattern was the same, but the difference was much more substantial in Tallahassee, while the differences among the Indian, Chicano, and white students in Arizona were slight. There was a significant sexual difference as well in all three sites, with females feeling responsible for large amounts of their support. But the difference was due mostly to black females in Pittsburgh, and to Chicano and white females in Arizona. Thus, white women in Pittsburgh and Indian women in Arizona did not feel they were spared financial responsibility in less measure than were their male counterparts.

Tables 81, 82, and 83 present the data for career decisions. In Pittsburgh, more black than white students planned to go to college and thought they would be successful. The reverse was true in Tallahassee, with greater amounts of whites anticipating successful college careers. At both sites, however, more black students had made firm career decisions than had whites. There were not great differences in the proportion of students who planned college careers nor in those making firm career choices among the three racial groups in Arizona, but the white and Chicano students expressed more confidence in the probable success of their college careers than did their Indian counterparts.

In Pittsburgh, there were no race/sex interactions, but more males anticipating college careers, more females having made a firm career decision, and a negligible difference in the anticipated degree of college success between the sexes. In Tallahassee, there was a race/sex interaction, with more black males (than black females) and more white females (than white males) planning college careers, more black males (than black females), and no sexual differences among the whites in anticipating college success, and more white males (than white females) and no sexual differences among the blacks in making firm career decisions.

A similar complicated race/sex interaction occurred in Arizona. More Indian females (than Indian males) and more Chicano males (than Chicano females) opted for college careers, while no sexual differences were manifest between the white sexual subgroups. More Chicano and white males expected success in college than did their female counterparts, while the Indian students displayed no sexual differences on this factor. Finally, more Indian and white females and more male Chicanos had made firm career choices than had their sexual counterparts.

Frequency of Career Counseling

Students reported career counseling visits on an average of a little over three times in Pittsburgh, two times in Tallahassee, and fewer than two times in Arizona during the school year in which they were surveyed.[2] The ranks of these three sites correspond to the times within the academic year in which they were visited, though, and in no way can they be taken to be suggestive of real differences in counseling frequencies between the sites.

Within Pittsburgh and Tallahassee, black students reported visits with counselors at higher frequencies (and substantially so) than did white students. The differences between the sexes were slight and inconsistent, with white males having a slightly higher visit rate than white females in Tallahassee, while the reverse was true in Pittsburgh. Female blacks in Tallahassee had more frequent visits than did their sexual counterparts of the same race, and again the reverse was true in Pittsburgh.

In Arizona, the Chicano students had higher visit rates by a small margin over the white students, and both were trailed substantially by the Indian students. Again, sexual differences were much less important than were racial differences, with male Chicanos having a very slightly higher rate than female Chicanos, white males having a consistent but moderately higher rate than the white female subgroup, but with the female Indians leading the male Indians by fairly substantially higher visit rates.

So far, only the visit rates of the subgroups have been discussed. Of major importance with this variable is whether it is related to the perception of nursing careers. In none of the sites was there evidence of any relationship between the frequency of career counseling visits and the evaluative perception of RN.

Tabulated as cumulative percentages, the results of these analyses are depicted in tables 84, 85, and 86. Those tables contain a category termed "percent no response." The instrument had a response category that allowed the students to indicate that they had made no visits to the counselor, but that category was rarely used. We must conclude that the category of no response includes both those who had made any visits and those who failed to answer the question. There is reason to believe that those who had not made any visits may be the major portion of those included in this category. That group was quite small in Pittsburgh, where the survey was conducted at the end of the academic year and became sizable in Tallahassee and Arizona, where the survey was conducted at the middle and beginning, respectively, of the school year.

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[2] It should be noted that the student was asked only to report the number of times that he saw his counselor, with no distinction as to whether the visit was initiated by the counselor or the student.

Exposure to Health Careers

Tables 87, 88, and 89 present data related to the students' exposure to health careers. There were no differences between black and white students in hospital volunteer work in Pittsburgh or Tallahassee, but in Arizona the differences found favored the Indians, whites, and Chicanos, in that order, in their level of volunteer service. There was substantially greater female volunteer participation than male participation in all subgroups at all sites.

There was a slight difference favoring white students in their willingness to do volunteer work in hospitals in Pittsburgh, but no similar difference in Tallahassee. While the willingness to do volunteer work by white students in Arizona was not substantially different than their white counterparts in Pittsburgh and Tallahassee, the Arizona Indian and Chicano students were much more willing (and about equally so) to do volunteer hospital work.

When it came to working in a hospital for pay, while the white students in Pittsburgh and Tallahassee increased markedly in their willingness for such an experience, the increase was far outsized by the black students who were willing to work in hospitals for pay in both of these sites. This was directly mirrored by a substantial increase in white students who would work in hospitals if pay were involved, and the much more substantial Indian and black students who would work in hospitals if pay were involved.

In Pittsburgh, larger numbers of black students indicated they knew physicians and RN's personally than did whites, while the reverse was true for dentists. The differences were relatively small with all three professional groups. In Tallahassee, white students claimed such relationships with all three professional groups with a substantially greater frequency than did black students. In Arizona, the decreasing order of such relationships was white, Chicano, and Indian students with all three professional categories except for dentist, where there were no differences between Indian and Chicano students.

Greater interest was expressed by black students than by white students in nursing careers at both the Pittsbugh and Tallahassee sites, with the difference being highly substantial in Tallahassee. The interest of white students in nursing careers was practically identical across the three sites (between 12.0 percent and 13.1 percent). Chicano students also had a substantially greater interest than white students in such careers, and Indian students had substantially greater interests than did Chicano students in such careers.

Generally, across sites and across most of the subgroups involved, there were significant positive correlations between (a) having done volunteer work in a hospital, (b) willingness to do volunteer work in a hospital, (c) willingness to do paid work in a hospital, (d) personal relationships with all three categories of health occupations, and (e) desire to become a nurse, with positive evaluative ratings of nursing careers.

Rejection of Nursing Careers

This item was not on the instrument administered in Pittsburgh. Tables 90 and 91 present the findings from the respondents in Tallahassee and Arizona. It will be recalled that the item was open-ended, asking those students who indicated in the previous item that they would not consider a nursing career to indicate why they would not. Those tables and the following analysis refer only to those students, and excludes students who said they would consider nursing careers. Students from the minority groups, and particularly female students, failed to respond to the item in fairly high frequencies. All of the responses were codable within five basic response categories. In all subgroups except Indian males and Chicano females, 30 percent to 40 percent of the students indicated that they just had no interest or had made another career choice. In all male subgroups, the most frequent reason given was the female-relatedness of the profession, accounting for roughly half of the male responses. Among the females, reasons classifiable as squeamishness (e.g., "Can't stand the sight of blood," "Don't like being around sick people") were the most predominant, accounting for 40 percent to 50 percent of the responses of the female subgroups, with "Too much education required" being the second most frequent female response.

Table 5.—Mean ratings of occupations on the financial reward subscale (Pittsburgh)

Subgroups	Occupations						Differences between means of RN and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Black males	2.2	3.6	3.4	3.6	4.5	4.4	[1] −0.862
Black females	2.0	4.0	3.1	3.8	4.2	4.3	[1] −0.540
White males	2.0	3.6	3.2	3.6	4.5	4.3	[1] −0.661
White females	1.8	4.0	3.5	4.1	4.5	4.2	−0.053
Race groups							
Total blacks	2.1	3.9	3.2	3.7	4.4	4.4	[1] −0.701
Total whites	1.9	3.8	3.4	3.9	4.5	4.3	[1] −0.400
Sex groups							
Total males	2.1	3.6	3.3	3.6	4.5	4.3	[1] −0.748
Total females	1.9	4.0	3.3	3.9	4.3	4.3	[1] −0.354
Total group	2.0	3.8	3.3	3.8	4.4	4.4	[1] −0.547

[1] $p < .01$ (two-tailed)

Table 6.—Mean ratings of occupations on the financial reward subscale (Tallahassee)

Subgroups	Occupations: Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	Differences between means of RN and OWN
Race/sex groups							
Black males	2.4	4.0	3.3	4.0	4.7	4.7	[1] —0.707
Black females	2.4	4.1	3.1	4.0	4.5	4.4	[1] —0.394
White males	1.6	3.3	2.1	3.7	4.4	4.1	[1] —0.828
White females	1.4	3.7	2.1	3.7	4.1	4.1	[1] —0.400
Race groups							
Total blacks	2.4	4.1	3.2	4.0	4.6	4.5	[1] —0.520
Total whites	1.5	3.5	2.1	3.5	4.2	4.1	[1] —0.613
Sex groups							
Total males	1.8	3.5	2.5	3.6	4.5	4.3	[1] —0.776
Total females	1.8	3.9	2.5	3.8	4.2	4.2	[1] —0.382
Total group	1.8	3.7	2.5	3.7	4.4	4.3	[1] —0.653

[1] $p < .01$ (two-tailed)

Table 7.—Mean ratings of occupations on the financial reward subscale (Arizona)

Subgroups	Occupations						Differences between means of RN and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Indian males	2.5	3.8	3.3	3.7	4.5	4.4	[1] −0.639
Indian females	2.1	3.9	3.6	4.1	4.5	4.1	+0.014
Chicano males	1.9	4.0	2.9	3.5	4.6	4.3	[1] −0.781
Chicano females	1.8	4.0	3.0	3.8	4.6	3.9	−0.068
White males	1.7	3.6	2.6	3.5	4.6	4.0	[1] −0.522
White females	1.5	3.9	2.7	3.9	4.4	3.9	−0.010
Race groups							
Indians	2.3	3.8	3.5	3.9	4.5	4.2	[1] −0.279
Chicanos	1.9	4.0	2.9	3.6	4.6	4.1	[1] −0.456
Whites	1.6	3.8	2.7	3.7	4.0	4.0	[1] −0.242
Sex groups							
Males	2.0	3.8	3.0	3.6	4.5	4.3	[1] −0.657
Females	1.9	3.9	3.2	4.0	4.5	4.0	−0.002
Total group	2.0	3.8	3.1	4.0	4.5	4.0	[1] −0.318

[1] $p < .01$ (two-tailed)

Table 8.—Mean ratings of occupations on the amount of education subscale (Pittsburgh)

Subgroups	Occupations						Differences between means of RN and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Black males	1.6	3.2	4.2	4.2	4.9	4.2	+0.046
Black females	1.5	3.5	4.3	4.4	4.9	4.0	[1] +0.362
White males	1.3	3.1	4.4	4.2	4.8	4.0	+0.175
White females	1.4	3.1	4.4	4.6	4.9	3.8	[1] +0.781
Race groups							
Total blacks	1.5	3.3	4.3	4.3	4.9	4.1	[1] +0.204
Total whites	1.3	3.1	4.4	4.4	4.9	3.9	[1] +0.494
Sex groups							
Total males	1.4	3.1	4.3	4.2	4.9	4.1	+0.115
Total females	1.4	3.3	4.4	4.5	4.9	3.9	[1] +0.565
Total group	1.4	3.3	4.3	4.3	4.9	4.0	[1] +0.349

[1] $p < .01$ (two-tailed)

Table 9.—Mean ratings of occupations on the amount of education subscale (Tallahassee)

Subgroups	Occupations						Differences between means of RN and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Black males	1.9	3.6	1.8	4.0	4.6	3.8	+0.152
Black females	1.7	3.8	1.8	4.4	4.7	4.0	[1] +0.394
White males	1.4	3.1	2.0	4.2	4.9	4.0	+0.177
White females	1.2	3.3	2.0	4.4	4.9	4.1	+0.270
Race groups							
Total blacks	1.8	3.7	1.8	4.2	4.7	3.9	[1] +0.290
Total whites	1.3	3.2	2.0	4.3	4.9	4.1	[1] +0.226
Sex groups							
Total males	1.5	3.3	2.0	4.1	4.8	3.9	+0.191
Total females	1.4	3.3	1.9	4.4	4.8	4.1	[1] +0.329
Total group	1.5	3.3	1.9	4.3	4.8	4.0	[1] +0.301

[1] $p < .01$ (two-tailed)

Table 10.—Mean ratings of occupations on the amount of education subscale (Arizona)

Subgroups	Occupations						Differences between means of RN and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Indian males	2.3	3.9	1.9	4.0	4.6	3.8	+0.183
Indian females	1.8	4.0	1.6	4.2	4.6	4.1	+0.173
Chicano males	1.7	3.7	1.7	4.2	4.8	3.9	+0.238
Chicano females	1.4	3.9	1.6	4.4	4.8	3.7	[1] +0.704
White males	1.5	3.2	1.6	4.2	4.9	3.9	+0.322
White females	1.4	3.5	1.5	4.6	5.0	3.8	[1] +0.750
Race groups							
Indians	2.0	3.9	1.7	4.1	4.6	3.9	[1] +0.177
Chicanos	1.6	3.8	1.7	4.3	4.8	4.8	[1] +0.451
Whites	1.4	3.4	1.6	4.4	4.9	3.9	[1] +0.547
Sex groups							
Males	1.9	3.7	1.8	4.1	4.7	3.9	+0.236
Females	1.6	3.8	1.6	4.4	4.8	4.0	[1] +0.419
Total group	1.8	3.7	1.7	4.3	4.7	3.9	[1] +0.417

[1] $p < .01$ (two-tailed)

Table 11.—Mean ratings of occupations on the personal reward subscale (Pittsburgh)

Subgroups	Occupations						Differences between means of RN and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Black males	2.0	3.3	3.5	4.0	4.6	4.6	[1] —0.572
Black females	2.0	3.6	3.6	4.1	4.5	4.5	[1] —0.408
White males	1.5	3.1	3.7	4.1	4.7	4.6	[1] —0.515
White females	1.7	3.6	3.8	4.6	4.8	4.6	—0.036
Race groups							
Total blacks	1.9	3.5	3.6	4.0	4.6	4.5	[1] —0.490
Total whites	1.6	3.3	3.8	4.3	4.7	4.5	[1] —0.229
Sex groups							
Total males	1.7	3.2	3.6	4.0	4.6	4.6	[1] —0.537
Total females	1.8	3.6	3.8	4.4	4.6	4.5	—0.163
Total group	1.8	3.4	3.7	4.2	4.6	4.5	[1] —0.349

[1] $p < .01$ (two-tailed)

Table 12.—Mean ratings of occupations on the personal reward subscale (Tallahassee)

Subgroups	Occupations						Differences between means of RN and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Black males	2.3	3.4	3.5	4.0	4.3	4.1	—0.198
Black females	2.3	3.9	3.7	4.1	4.5	4.3	[1] —0.307
White males	1.5	2.8	3.6	4.1	4.5	4.5	[1] —0.438
White females	1.3	2.9	3.9	4.5	4.8	4.7	[1] —0.168
Race groups							
Total blacks	2.3	3.7	3.6	4.0	4.4	4.2	[1] —0.264
Total whites	1.4	2.8	3.7	4.3	4.6	4.6	[1] —0.308
Sex groups							
Total males	1.7	3.0	3.6	4.0	4.4	4.4	[1] —0.327
Total females	1.7	3.3	3.8	4.4	4.6	4.6	[1] —0.211
Total group	1.7	3.1	3.7	4.2	4.5	4.5	[1] —0.287

[1] $p < .01$ (two-tailed)

Table 13.—Mean ratings of occupations on the personal reward subscale (Arizona)

Subgroups	Occupations						Differences between means of RN and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Indian males	2.6	3.5	3.5	3.7	4.4	4.0	[1] −0.311
Indian females	2.3	3.6	3.7	4.0	4.3	4.1	−0.119
Chicano males	2.0	3.7	3.7	4.1	4.6	4.4	−0.257
Chicano females	1.9	3.7	3.8	4.5	4.7	4.4	+0.045
White males	1.7	3.0	3.7	4.3	4.6	4.4	+0.023
White females	1.7	3.2	3.9	4.5	4.7	4.5	+0.200
Race groups							
Indians	2.4	3.6	3.6	3.9	4.4	4.1	[1] −0.205
Chicanos	1.9	3.7	3.7	4.3	4.6	4.4	−0.119
Whites	1.7	3.1	3.8	4.4	4.6	4.4	+0.021
Sex groups							
Males	2.2	3.4	3.6	4.0	4.5	4.3	[1] −0.321
Females	2.1	3.5	3.7	4.2	4.5	4.3	−0.048
Total group	2.1	3.5	3.7	4.2	4.5	4.3	[1] −0.133

[1] $p < .01$ (two-tailed)

Table 14.—Mean ratings of occupations on the occupational status subscale (Pittsburgh)

Subgroups	Occupations						Differences between means of RN and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Black males	1.7	3.4	3.5	3.9	4.7	4.3	[1] —0.480
Black females	1.6	3.7	3.5	4.1	4.6	4.2	—0.178
White males	1.4	3.2	3.5	3.6	4.7	4.2	[1] —0.546
White females	1.6	3.6	3.7	4.2	4.8	4.1	—0.094
Race groups							
Total blacks	1.7	3.6	3.5	4.0	4.7	4.3	[1] —0.329
Total whites	1.5	3.4	3.6	3.9	4.8	4.1	[1] —0.232
Sex groups							
Total males	1.5	3.3	3.5	3.7	4.7	4.2	[1] —0.522
Total females	1.6	3.6	3.6	4.1	4.7	4.2	—0.051
Total group	1.6	3.4	3.6	3.9	4.7	4.1	[1] —0.279

[1] $p < .01$ (two-tailed)

Table 15.—Mean ratings of occupations on the occupational status subscale (Tallahassee)

Subgroups	Occupations						Differences between means of RN and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Black males	2.1	3.4	3.6	3.9	4.5	4.4	[1] −0.473
Black females	2.0	3.9	3.7	4.0	4.6	4.2	−0.221
White males	1.4	3.0	3.0	3.6	4.7	4.1	[1] −0.537
White females	1.3	3.3	3.2	4.0	4.7	4.3	[1] −0.297
Race groups							
Total blacks	2.1	3.7	3.6	4.0	4.6	4.3	[1] −0.324
Total whites	1.4	3.1	3.1	3.8	4.7	4.2	[1] −0.426
Sex groups							
Total males	1.6	3.1	3.2	3.7	4.6	4.2	[1] −0.502
Total females	1.6	3.5	3.4	4.0	4.7	4.3	[1] −0.245
Total group	1.6	3.3	3.3	3.9	4.7	4.2	[1] −0.238

[1] $p < .01$ (two-tailed)

Table 16.—Mean ratings of occupations on the occupational status subscale (Arizona)

Subgroups	Occupations						Differences between means of RN and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Indian males	2.4	3.4	3.2	3.6	4.2	3.8	−0.208
Indian females	2.1	3.6	3.5	3.8	4.3	3.9	−0.064
Chicano males	1.8	3.7	3.5	3.9	4.7	4.2	−0.257
Chicano females	1.8	3.6	3.4	4.2	4.6	4.1	+0.114
White males	1.6	2.8	3.3	3.8	4.0	4.1	−0.222
White females	1.5	3.5	3.5	4.2	4.8	4.1	+0.150
Race groups							
Indians	2.2	3.5	3.4	3.7	4.3	3.8	−0.130
Chicanos	1.9	3.6	3.5	4.0	4.7	4.2	−0.088
Whites	1.6	3.2	3.4	4.0	4.4	4.1	−0.026
Sex groups							
Males	2.1	3.4	3.4	3.8	4.5	4.0	[1] −0.201
Females	1.9	3.6	3.5	4.0	4.5	4.0	+0.007
Total group	2.0	3.5	3.4	3.9	4.5	4.0	[1] −0.114

[1] $p < .01$ (two-tailed)

Table 17.—Mean ratings of occupations on the sex-relatedness subscale (Pittsburgh)

Subgroups	Occupations						Differences between means of RN and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Black males	3.2	4.2	3.0	4.2	2.3	2.1	[1] +2.066
Black females	3.0	4.3	3.1	4.1	2.4	3.6	[1] +0.480
White males	3.4	4.4	3.1	4.3	2.0	1.8	[1] +2.439
White females	3.3	4.4	3.1	4.2	2.3	3.7	[1] +0.476
Race groups							
Total blacks	3.1	4.2	3.0	4.1	2.3	2.9	[1] +1.273
Total whites	3.1	4.4	3.1	4.2	2.1	2.8	[1] +1.448
Sex groups							
Total males	3.3	4.3	3.0	4.2	2.1	2.0	[1] +2.246
Total females	3.1	4.4	3.1	4.1	2.3	3.6	[1] +0.505
Total group	3.2	4.3	3.1	4.2	2.2	2.8	[1] +1.357

[1] $p < .01$ (two-tailed)

Table 18.—Mean ratings of occupations on the sex-relatedness subscale (Tallahassee)

Subgroups	Occupations						Differences between means of RN and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Black males	3.0	3.9	3.0	4.0	2.2	1.9	[1] +2.098
Black females	3.0	4.2	3.3	4.1	2.6	3.7	[1] +0.460
White males	3.4	4.5	3.3	4.3	2.0	1.9	[1] +2.391
White females	3.2	4.5	3.4	4.3	2.3	3.3	[1] +0.957
Race groups							
Total blacks	3.0	4.1	3.2	4.1	2.4	2.9	[1] +1.155
Total whites	3.3	4.5	3.3	4.3	2.1	2.6	[1] +1.690
Sex groups							
Total males	3.3	4.3	3.2	4.2	2.1	1.9	[1] +2.280
Total females	3.1	4.3	3.3	4.2	2.4	3.5	[1] +0.735
Total group	3.2	4.3	3.3	4.2	2.2	2.7	[1] +1.502

[1] $p < .01$ (two-tailed)

Table 19.—Mean ratings of occupations on the sex-relatedness subscale (Arizona)

Subgroups	Occupations						Differences between means of RN and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Indian males	3.0	3.6	2.8	3.7	2.0	2.0	[1] +1.644
Indian females	3.2	4.0	3.3	4.1	2.6	3.8	[1] +0.297
Chicano males	3.2	4.4	2.9	4.1	2.0	1.9	[1] +2.143
Chicano females	3.1	4.4	3.2	4.0	2.4	3.6	[1] +0.432
White males	3.2	4.5	3.0	4.5	1.9	1.6	[1] +2.978
White females	3.2	4.4	3.1	4.2	2.1	3.5	[1] +0.690
Race groups							
Indians	3.1	3.8	3.1	3.9	2.4	3.0	[1] +0.905
Chicanos	3.2	4.4	3.0	4.1	2.2	2.7	[1] +1.363
Whites	3.1	4.1	3.2	4.4	2.3	2.6	[1] +1.774
Sex groups							
Males	3.1	4.1	2.9	4.0	2.1	1.9	[1] +2.086
Females	3.2	4.1	3.2	4.1	2.4	3.6	[1] +0.439
Total group	3.1	4.1	3.1	4.0	2.3	2.8	[1] +1.231

[1] $p < .01$ (two-tailed)

Table 20.—Mean ratings of occupations on the work enjoyableness subscale (Pittsburgh)

Subgroups	Occupations						Differences between means of RN and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Black males	1.8	2.9	3.9	3.6	4.1	4.5	[1] —0.855
Black females	1.7	3.8	3.4	3.8	4.0	4.5	[1] —0.697
White males	1.5	2.8	3.4	3.9	4.3	4.5	[1] —0.667
White females	1.6	3.2	3.7	4.1	4.4	4.5	[1] —0.412
Race groups							
Total blacks	1.8	3.2	3.4	3.7	4.1	4.5	[1] —0.776
Total whites	1.5	3.0	3.5	4.0	4.4	4.5	[1] —0.532
Sex groups							
Total males	1.6	2.6	3.4	3.8	4.2	4.5	[1] —0.761
Total females	1.7	3.3	3.6	4.0	4.2	4.5	[1] —0.556
Total group	1.6	3.1	3.5	3.9	4.2	4.5	[1] —0.659

[1] $p < .01$ (two-tailed)

Table 21.—Mean ratings of occupations on the work enjoyableness subscale (Tallahassee)

Subgroups	Occupations						Differences between means of R and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Black males	2.4	3.1	3.5	3.6	4.1	4.6	[1] —0.924
Black females	2.3	3.7	3.6	3.8	4.1	4.3	[1] —0.512
White males	1.4	2.4	3.1	3.5	4.2	4.5	[1] —0.958
White females	1.4	2.6	3.5	4.1	4.5	4.8	[1] —0.692
Race groups							
Total blacks	2.3	3.4	3.6	3.7	4.1	4.4	[1] —0.683
Total whites	1.4	2.5	3.3	3.8	4.3	4.7	[1] —0.834
Sex groups							
Total males	1.8	2.6	3.2	3.6	4.2	4.5	[1] —0.934
Total females	1.7	3.0	3.5	4.0	4.3	4.6	[1] —0.630
Total group	1.8	2.8	3.4	3.8	4.3	4.6	[1] —0.786

[1] $p < .01$ (two-tailed)

Table 22.—Mean ratings of occupations on the work enjoyableness subscale (Arizona)

Subgroups	Occupations						Differences between means of RN and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Indian males	2.6	3.4	3.6	3.6	3.7	4.3	[1] —0.756
Indian females	2.3	3.6	3.6	4.0	3.8	4.4	[1] —0.362
Chicano males	1.9	3.3	3.6	4.0	4.4	4.5	[1] —0.562
Chicano females	1.7	3.4	3.6	4.1	4.3	4.5	[1] —0.425
White males	1.7	2.5	3.2	3.6	4.1	4.6	[1] —0.956
White females	1.6	3.0	3.5	3.9	4.3	4.6	[1] —0.660
Race groups							
Indians	2.4	3.5	3.6	3.8	3.8	4.3	[1] —0.541
Chicanos	1.8	3.3	3.6	4.0	4.4	4.5	[1] —0.500
Whites	1.7	2.8	3.4	3.8	4.2	4.6	[1] —0.800
Sex groups							
Males	2.2	3.2	3.5	3.7	4.0	4.4	[1] —0.684
Females	2.0	3.4	3.6	4.1	4.1	4.4	[1] —0.112
Total group	2.1	3.3	3.5	3.8	4.0	4.4	[1] —0.587

[1] $p < .01$ (two-tailed)

Table 23.—Mean ratings of occupations on the occupational challenge subscale (Pittsburgh)

Subgroups	Occupations						Differences between means of R and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Black males	2.1	3.0	3.3	4.1	4.6	4.5	[1] −0.447
Black females	2.0	3.6	4.0	4.3	4.4	4.5	−0.165
White males	1.7	2.9	3.8	4.1	4.4	4.5	[1] −0.364
White females	1.9	3.4	4.1	4.4	4.8	4.5	[1] −0.102
Race groups							
Total blacks	2.1	3.3	3.9	4.2	4.5	4.5	[1] −0.306
Total whites	1.8	3.1	3.9	4.3	4.6	4.6	−0.194
Sex groups							
Total males	1.9	2.9	3.9	4.1	4.5	4.5	[1] −0.404
Total females	2.0	3.5	4.0	4.4	4.6	4.4	−0.109
Total group	1.9	3.2	3.9	4.2	4.5	4.5	[1] −0.250

[1] $p < .01$ (two-tailed)

Table 24.—Mean ratings of occupations on the occupational challenge subscale (Tallahassee)

Subgroups	Occupations						Differences between means of RN and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Black males	2.4	3.3	3.7	4.2	4.3	4.5	−0.264
Black females	2.3	3.8	3.8	4.2	4.3	4.2	+0.000
White males	1.6	3.7	3.6	4.0	4.4	[illegible]	[1] −0.468
White females	1.4	2.9	4.0	4.[illegible]	4.6	4.7	[1] −0.254
Race groups							
Total blacks	2.3	3.6	3.8	4.2	4.3	4.3	−0.111
Total whites	1.5	2.8	3.8	4.2	4.5	4.6	[1] −0.363
Sex groups							
Total males	1.9	2.9	3.7	4.1	4.4	4.5	[1] −0.369
Total females	1.8	3.3	3.9	4.3	4.5	4.5	−0.160
Total group	1.8	3.1	3.8	4.2	4.4	4.5	[1] −0.286

[1] $p < .01$ (two-tailed)

Table 25.—Mean ratings of occupations on the occupational challenge subscale (Arizona)

Subgroups	Occupations						Differences between means of RN and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Indian males	2.5	3.4	3.3	3.5	4.1	4.0	[1] −0.433
Indian females	2.5	3.7	3.7	3.9	4.0	4.1	[1] −0.186
Chicano males	2.0	3.4	3.8	4.1	4.6	4.4	[1] −0.324
Chicano females	2.0	3.5	3.9	4.2	4.7	4.2	−0.034
White males	1.8	2.7	3.8	3.9	4.4	4.3	[1] −0.367
White females	1.7	3.0	4.1	4.5	4.7	4.5	−0.010
Race groups							
Indians	2.5	3.5	3.6	3.7	4.1	4.0	[1] −0.303
Chicanos	2.0	3.4	3.9	4.1	4.6	4.3	−0.192
Whites	1.7	3.2	3.9	4.3	4.6	4.4	−0.179
Sex groups							
Males	2.2	3.2	3.6	3.8	4.3	4.1	[1] −0.283
Females	2.2	3.5	3.9	4.0	4.3	4.2	−0.112
Total group	2.2	3.3	3.7	3.9	4.3	4.2	[1] −0.255

[1] $p < .01$ (two-tailed)

Table 26.—Mean ratings of occupations on the advancement opportunities subscale (Pittsburgh)

Subgroups	Occupations						Differences between means of RN and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Black males	1.8	2.9	4.0	3.6	4.4	4.3	[1] −0.730
Black females	1.7	3.5	3.4	3.9	4.4	4.3	[1] −0.483
White males	1.4	2.7	2.8	3.4	4.5	4.2	[1] −0.879
White females	1.4	3.4	3.0	3.9	4.6	4.1	−0.163
Race groups							
Total blacks	1.7	3.2	3.3	3.7	4.4	4.3	[1] −0.607
Total whites	1.4	3.0	2.9	3.6	4.5	4.2	[1] −0.529
Sex groups							
Total males	1.6	2.8	3.0	3.5	4.4	4.3	[1] −0.798
Total females	1.5	3.5	3.2	3.9	4.5	4.2	[1] −0.349
Total group	1.5	3.1	3.1	3.7	4.5	4.2	[1] −0.565

[1] $p < .01$ (two-tailed)

Table 27.—Mean ratings of occupations on the advancement opportunities subscale (Tallahassee)

Subgroups	Occupations						Differences between means of RN and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Black males	2.2	3.2	3.3	3.8	4.2	4.3	[1] −0.551
Black females	2.1	3.8	3.4	4.0	4.4	4.1	−0.110
White males	1.4	2.8	2.4	3.6	4.5	4.2	[1] −0.634
White females	1.3	3.4	2.4	3.7	4.7	4.2	[1] −0.465
Race groups							
Total blacks	2.1	3.5	3.3	3.9	4.3	4.2	[1] −0.284
Total whites	1.4	3.1	2.4	3.6	4.6	4.2	[1] −0.557
Sex groups							
Total males	1.7	2.9	2.7	3.6	4.4	4.2	[1] −0.620
Total females	1.6	3.5	2.8	3.9	4.6	4.2	[1] −0.317
Total group	1.7	3.2	2.8	3.8	4.5	4.2	[1] −0.402

[1] $p < .01$ (two-tailed)

Table 28.—Mean ratings of occupations on the advancement opportunities subscale (Arizona)

Subgroups	Occupations						Differences between means of RN and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Indian males	2.4	3.4	3.4	3.7	4.1	3.9	−0.239
Indian females	2.2	3.7	3.5	3.7	4.1	3.9	−0.196
Chicano males	1.8	3.1	3.3	3.9	4.6	4.3	[1] −0.383
Chicano females	1.7	3.6	3.2	4.1	4.5	4.1	+0.057
White males	1.7	2.8	2.4	3.6	4.2	4.1	[1] −0.483
White females	1.7	3.3	2.8	3.8	4.6	4.1	−0.300
Race groups							
Indians	2.3	3.5	3.4	3.7	4.1	3.9	[1] −0.212
Chicanos	1.8	3.3	3.3	4.0	4.6	4.2	−0.155
Whites	1.7	3.1	2.6	3.7	4.4	4.1	[1] −0.386
Sex groups							
Males	2.1	3.2	3.2	3.7	4.3	4.1	[1] −0.374
Females	2.0	3.5	3.8	3.8	4.3	4.0	[1] −0.186
Total group	2.0	3.4	3.2	3.8	4.3	4.0	[1] −0.250

[1] $p < .01$ (two-tailed)

Table 29.—Mean ratings of occupations on the work hours subscale (Pittsburgh)

Subgroups	Occupations						Differences between means of RN and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Black males	3.0	3.8	3.5	3.1	3.0	3.9	[1] −0.770
Black females	2.9	4.1	4.0	3.2	3.1	4.1	[1] −0.809
White males	3.1	4.0	4.1	2.6	2.7	3.8	[1] −1.127
White females	3.0	4.3	4.2	2.7	2.4	4.1	[1] −1.410
Race groups							
Total blacks	3.0	3.9	4.0	3.2	3.0	4.0	[1] −0.790
Total whites	3.1	4.2	4.2	2.7	2.4	3.9	[1] −1.277
Sex groups							
Total males	3.1	3.9	4.1	2.9	2.8	3.8	[1] −0.953
Total females	3.0	4.2	4.1	2.9	2.7	4.1	[1] −1.112
Total group	3.0	4.0	4.1	2.9	2.8	3.9	[1] −1.029

[1] $p < .01$ (two-tailed)

Table 30.—Mean ratings of occupations on the work hours subscale (Tallahassee)

Subgroups	Occupations						Differences between means of RN and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Black males	3.3	3.9	3.8	3.3	3.3	4.3	[1] −1.076
Black females	3.2	4.3	4.0	3.5	3.7	4.4	[1] −0.912
White males	2.7	3.7	3.7	2.4	2.5	3.6	[1] −1.162
White females	2.6	4.1	3.8	2.2	2.2	3.8	[1] −1.562
Race groups							
Total blacks	3.3	4.1	3.9	3.4	3.6	4.4	[1] −0.986
Total whites	2.7	3.9	3.7	2.3	2.3	3.7	[1] −1.358
Sex groups							
Total males	2.9	3.8	3.7	2.7	2.7	3.9	[1] −1.165
Total females	2.9	4.2	3.9	2.8	2.8	4.1	[1] −1.294
Total group	2.9	4.0	3.8	2.7	2.8	4.0	[1] −1.286

[1] $p < .01$ (two-tailed)

Table 31—Mean ratings of occupations on the work hours subscale (Arizona)

Subgroups	Occupations						Differences between means of RN and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Indian males	3.1	3.9	3.9	3.7	4.0	4.3	[1] −0.581
Indian females	2.9	4.1	4.2	4.0	4.0	4.2	[1] −0.232
Chicano males	3.0	3.9	3.9	2.9	3.1	3.9	[1] −0.962
Chicano females	2.8	4.2	4.0	3.2	3.2	4.1	[1] −0.864
White males	3.0	3.7	3.8	2.6	2.7	4.0	[1] −1.311
White females	2.9	4.3	4.2	2.7	2.5	3.9	[1] −1.270
Race groups							
Indians	3.0	4.0	4.1	3.9	4.0	4.3	[1] −0.390
Chicanos	2.9	4.0	3.9	3.0	3.2	4.0	[1] −0.917
Whites	3.0	4.0	4.0	2.6	2.6	3.9	[1] −1.289
Sex groups							
Males	3.0	3.8	3.9	3.2	3.5	4.1	[1] −0.857
Females	2.9	4.1	4.1	3.5	3.5	4.1	[1] −0.186
Total group	2.9	4.0	4.0	3.4	3.5	4.1	[1] −0.733

[1] $p < .01$ (two-tailed)

Table 32.—Mean ratings of occupations on the self-supervision subscale (Pittsburgh)

Subgroups	Occupations						Differences between means of RN and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Black males	3.2	2.9	2.6	3.1	4.0	4.2	[1] −1.099
Black females	2.9	3.5	3.6	3.5	3.8	4.1	[1] −0.599
White males	3.3	3.0	3.7	2.9	4.0	4.3	[1] −1.394
White females	3.2	3.3	3.8	3.2	3.9	4.0	[1] −0.771
Race groups							
Total blacks	3.1	3.2	3.5	3.3	3.9	4.2	[1] −0.849
Total whites	3.2	3.2	3.8	3.0	4.0	4.1	[1] −1.082
Sex groups							
Total males	3.2	3.0	3.6	3.0	4.0	4.3	[1] −1.264
Total females	3.0	3.4	3.7	3.4	4.0	4.0	[1] −0.692
Total group	3.1	3.2	3.4	3.2	3.9	4.1	[1] −0.980

[1] $p < .01$ (two-tailed)

Table 31.—Mean ratings of occupations on the self-supervision subscale (Tallahassee)

Subgroups	Occupations						Differences between means of RN and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Black males	3.2	3.2	3.9	3.3	4.0	4.3	[1] −1.000
Black females	3.1	3.8	3.7	3.5	3.9	4.2	[1] −0.661
White males	3.2	2.6	3.5	2.8	3.8	4.3	[1] −1.521
White females	3.1	3.2	3.7	3.1	3.8	4.3	[1] −1.238
Race groups							
Total blacks	3.2	3.5	3.8	3.4	4.0	4.2	[1] −0.804
Total whites	3.1	2.9	3.6	3.0	3.8	4.3	[1] −1.374
Sex groups							
Total males	3.2	2.8	3.6	3.0	3.9	4.3	[1] −1.364
Total females	3.1	3.4	3.7	3.3	3.8	4.3	[1] −1.022
Total group	2.9	3.1	3.6	3.1	3.9	4.3	[1] −1.160

[1] $p < .01$ (two-tailed)

Table 34.—Mean ratings of occupations on the self-supervision subscale (Arizona)

Subgroups	Occupations						Differences between means of RN and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Indian males	3.1	3.2	3.4	3.4	3.7	3.9	[1] −0.472
Indian females	3.2	3.5	3.6	3.6	3.9	3.9	[1] −0.268
Chicano males	2.8	3.2	3.5	3.2	4.1	4.1	[1] −0.865
Chicano females	2.7	3.7	3.8	3.5	4.0	4.1	[1] −0.625
White males	3.1	2.7	3.5	2.9	3.9	4.2	[1] −1.311
White females	3.4	3.2	3.8	3.3	3.8	4.2	[1] −0.910
Race groups							
Indians	3.2	3.4	3.5	3.5	3.8	3.9	[1] −0.359
Chicanos	2.8	3.4	3.6	3.3	4.1	4.1	[1] −0.755
Whites	3.3	2.9	3.7	3.1	3.9	4.2	[1] −1.100
Sex groups							
Males	3.1	3.1	3.5	3.2	3.9	4.0	[1] −0.724
Females	3.1	3.5	3.7	3.5	3.9	4.0	[1] −0.519
Total group	3.1	3.3	3.6	3.4	3.9	4.0	[1] −0.644

[1] $p < .01$ (two-tailed)

Table 35.—Mean ratings of occupations on the work difficulty subscale (Pittsburgh)

Subgroups	Occupations						Differences between means of R and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Black males	2.1	3.1	3.3	2.3	1.7	2.2	+0.053
Black females	3.2	2.9	2.5	2.1	1.6	2.6	[1] −0.526
White males	3.5	3.0	2.8	2.2	1.7	2.1	+0.176
White females	3.6	2.8	2.5	1.8	1.4	2.3	[1] −0.530
Race groups							
Total blacks	3.2	3.0	2.5	2.2	1.7	2.4	[1] −0.237
Total whites	3.5	2.9	2.6	2.0	1.5	2.2	[1] −0.179
Sex groups							
Total males	3.3	3.0	2.7	2.3	1.7	2.2	+0.115
Total females	3.4	3.0	2.5	2.0	1.5	2.5	[1] −0.499
Total group	3.4	2.9	2.6	2.1	1.6	2.3	[1] −0.197

[1] $p < .01$ (two-tailed)

Table 38.—Mean ratings of occupations on the work difficulty subscale (Tallahassee)

Subgroups	Occupations						Differences between means of R and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Black males	3.3	3.0	2.7	2.4	1.9	2.5	−0.098
Black females	3.5	2.9	2.6	2.3	2.0	3.0	[1] −0.654
White males	3.4	2.9	2.6	2.3	1.8	2.1	+0.208
White females	3.6	2.9	2.4	1.7	1.4	1.9	[1] −0.255
Race groups							
Total blacks	3.4	3.0	2.7	2.4	2.0	2.8	[1] −0.425
Total whites	3.5	2.9	2.5	2.0	1.6	2.0	−0.024
Sex groups							
Total males	3.4	3.0	2.7	2.3	1.9	2.3	+0.053
Total females	3.5	2.9	2.5	1.9	1.6	2.4	−0.414
Total group	3.4	2.9	2.6	2.1	1.8	2.3	−0.154

[1] $p < .01$ (two-tailed)

Table 37.—Mean ratings of occupations on the work difficulty subscale (Arizona)

Subgroups	Occupations: Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	Differences between means of RN and OWN
Race/sex groups							
Indian males	3.5	2.9	2.8	2.5	2.1	2.5	+0.078
Indian females	3.8	2.8	2.7	2.4	1.8	2.6	−0.164
Chicano males	2.9	2.9	2.7	2.3	1.7	2.3	+0.057
Chicano females	3.0	2.8	2.7	2.0	1.7	2.7	[1] −0.682
White males	3.2	3.1	2.8	2.1	1.8	2.3	−0.233
White females	3.3	2.8	2.4	1.6	1.5	2.3	[1] −0.660
Race groups							
Indians	3.7	2.8	2.7	2.5	1.9	2.5	−0.057
Chicanos	2.9	2.9	2.7	2.2	1.7	2.5	[1] −0.280
Whites	3.2	3.0	2.6	1.9	1.7	2.3	[1] −0.458
Sex groups							
Males	3.2	3.0	2.7	2.4	1.9	2.4	−0.004
Females	3.4	2.8	2.6	2.1	1.7	2.5	[1] −0.388
Total group	3.3	2.9	2.7	2.3	1.8	2.5	[1] −0.202

[1] $p < .01$ (two-tailed)

Table 38.—Mean ratings of occupations on the desire to enter subscale (Pittsburgh)

Subgroups	Occupations						Differences between means of RN and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Black males	1.1	1.4	2.2	1.7	2.6	4.8	[1] −3.138
Black females	1.3	2.6	1.9	2.1	2.5	4.7	[1] −2.563
White males	1.1	1.3	1.6	1.3	2.4	4.8	[1] −3.509
White females	1.1	2.8	2.1	2.2	2.0	4.8	[1] −1.602
Race groups							
Total blacks	1.2	2.0	2.1	1.9	2.5	4.7	[1] −2.852
Total whites	1.1	2.0	1.9	1.7	2.2	4.8	[1] −3.068
Sex groups							
Total males	1.1	1.3	1.9	1.4	2.5	4.8	[1] −3.335
Total females	1.2	2.7	2.0	2.1	2.3	4.7	[1] −2.600
Total group	1.2	2.0	2.0	1.8	2.4	4.8	[1] −2.962

[1] $p < .01$ (two-tailed)

Table 39.—Mean ratings of occupations on the desire to enter subscale (Tallahassee)

Subgroups	Occupations						Differenc between means of R and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Black males	1.5	1.4	2.3	1.7	2.6	4.5	[1] −2.783
Black females	1.6	3.6	2.4	2.5	2.2	4.5	[1] −2.016
White males	1.1	1.2	1.7	1.3	2.2	4.7	[1] −3.363
White females	1.1	2.2	2.3	2.2	2.2	4.7	[1] −2.511
Race groups							
Total blacks	1.5	2.7	2.3	2.2	2.4	4.5	[1] −2.339
Total whites	1.1	1.8	2.0	1.8	2.3	4.7	[1] −2.934
Sex groups							
Total males	1.3	1.4	1.8	1.5	2.4	4.7	[1] −3.185
Total females	1.3	2.6	2.1	2.3	2.4	4.7	[1] −2.305
Total group	1.3	2.0	2.0	1.9	2.4	4.7	[1] −2.776

[1] $p < .01$ (two-tailed)

Table 40.—Mean ratings of occupations on the desire to enter subscale (Arizona)

Subgroups	Occupations						Differences between means of RN and OWN
	Laundry worker	Secretary	High school teacher	Registered nurse	Medical doctor	Own desired occupation	
Race/sex groups							
Indian males	2.0	2.2	2.5	2.3	3.0	4.2	[1] −2.006
Indian females	1.9	3.1	2.7	3.3	2.7	4.2	[1] −0.936
Chicano males	1.3	1.3	2.2	1.9	2.8	4.7	[1] −2.819
Chicano females	1.2	2.8	1.9	2.7	2.3	4.4	[1] −1.773
White males	1.1	1.3	1.9	1.4	2.5	4.7	[1] −3.311
White females	1.1	2.3	2.2	2.3	2.0	4.8	[1] −2.540
Race groups							
Indians	1.9	2.7	2.6	2.8	2.8	4.3	[1] −1.420
Chicanos	1.3	2.0	2.1	2.2	2.6	4.6	[1] −2.342
Whites	1.1	1.8	2.1	1.9	2.2	4.8	[1] −2.905
Sex groups							
Males	1.6	1.8	2.3	1.9	2.8	4.5	[1] −2.536
Females	1.5	2.8	2.4	2.9	2.5	4.4	[1] −1.535
Total group	1.6	2.4	2.4	2.4	2.6	4.4	[1] −2.015

Table 41.—Distribution of occupational choices (Pittsburgh)[1]

Occupational categories	Total group	Race group		Sex group		Race/sex subgroups			
						Black		White	
		Black	White	Males	Females	Males	Females	Males	Females
	N=645	N=304	N=341	N=320	N=341	N=152	N=152	N=168	N=173
Professional II	18	21	15	13	23	19	24	8	23
Professional I	16	17	15	22	10	19	14	25	6
Clerical	15	12	18	1	29	1	22	1	35
Skilled craftsman	12	11	13	23	2	21	2	25	3
Technical	9	10	8	6	12	6	14	6	10
Managerial	6	9	3	7	4	12	5	3	3
Laborer	6	4	7	10	3	6	3	12	3
Civil servant	6	2	9	7	5	1	2	13	6
Other health professions	4	6	2	4	4	7	6	3	2
Registered nurse	3	3	3	—	5	—	5	—	6
Self-employed	1	2	1	3	—	4	—	1	—
Homemaker	1	—	1	—	1	—	—	—	2
Undecided	3	3	5	4	2	4	3	3	2
Total percentage	100	100	100	100	100	100	100	100	100

[1] Entries are percentage of students giving occupations in each category.

Table 42.—Distribution of occupational choices (Tallahassee)[1]

						Race/sex subgroups			
Occupational categories	Total group N=614	Race group		Sex group		Black		White	
		Black N=224	White N=390	Males N=289	Females N=325	Males N=94	Females N=130	Males N=195	Fema N=
Professional I	19	12	23	25	13	15	9	29	16
Skilled	14	14	15	23	7	26	5	22	7
Clerical	14	22	9	3	23	5	34	2	16
Professional II	12	14	11	6	17	9	18	5	17
Technical	8	6	9	8	8	5	7	9	8
Managerial	5	4	5	6	2	5	2	9	2
Civil servant	4	3	4	6	2	5	2	7	2
Registered nurse	4	4	4	—	7	—	7	—	7
Other health professions	4	2	5	2	6	—	3	3	7
Self employed	1	1	1	2	—	3	—	2	1
Agricultural	1	—	1	1	—	1	—	2	1
Homemaker	—	—	1	—	1	—	—	—	1
Undecided	11	15	9	12	12	22	11	7	13
Total percentage	100	100	100	100	100	100	100	100	100

[1] Entries are percentage of students giving occupations in each category.

Table 43.—Distribution of occupational choices (Arizona)[1]

Occupational categories	Total group N=798	Race group			Sex group		Race/sex subgroups					
							Indian		Chicano		White	
		Indians	Chicano	White	Male	Female	Male	Female	Male	Female	Male	Female
		N=405	N=202	N=191	N=385	N=413	N=184	N=221	N=110	N=92	N=91	N=100
Skilled craftsman	20	22	19	16	39	1	47	1	33	2	32	1
Clerical	14	18	10	9	2	25	4	29	1	22	—	17
Professional II	9	10	9	8	6	13	5	14	7	11	5	10
Registered nurse	7	10	3	4	—	13	—	19	—	9	—	8
Professional I	6	5	11	7	9	4	8	2	10	8	11	3
Civil servant	6	2	8	12	8	4	—	5	13	3	19	5
Technical	5	2	3	12	3	7	2	3	3	3	5	17
Laborer	5	3	5	10	8	3	5	1	8	1	12	8
Managerial	4	3	5	4	4	3	2	5	6	3	6	1
Self employed	4	3	5	4	4	3	5	1	3	9	4	4
Other health professions	3	2	7	5	2	4	1	3	5	10	2	3
Homemaker	2	1	1	11	—	5	—	2	—	3	—	12
Undecided	15	19	13	6	15	14	20	15	11	20	4	11

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[1] Entries are percentage of students giving occupations in each category.

Table 44.—Comparative analysis: Categories of occupational choices (Pittsburgh, Tallahassee. Arizona)[1]

Occupational categories	White respondents			Race groups				Sites			Sex groups	
	Pgh	Arizona	Talla	Indian	Black	Chicano	White	Pgh	Arizona	Talla	Males	Females
	N=341	N=191	N=390	N=405	N=528	N=202	N=922	N=645	N=614	N=798	N=994	N=1063
Professional I	15	11	23	5	15	7	17	16	6	19	15	8
Professional II	15	9	11	10	18	8	12	18	9	12	8	17
Technical	8	3	9	2	8	12	7	9	5	8	5	8
Skilled craftsman	13	19	15	22	12	16	15	12	20	14	29	3
Clerical	18	10	9	18	17	9	12	15	14	14	19	25
Registered nurse	3	3	4	10	3	4	3	3	7	4	—	8
Other health professions	2	7	5	2	4	5	4	4	3	4	3	4
Undecided	5	13	9	19	8	6	8	3	15	11	11	10

[1] Entries are percentage of students giving occupations in each category.

Table 45.—Course and noncourse requirements for admission to nursing schools (Pittsburgh, Tallahassee, and Arizona)[1]

Course and non-course requirements	White respondents			Race groups				Sites			Sex groups	
	Pgh	Talla	Arizona	Indian	Black	Chicano	White	Pgh	Talla	Arizona	Males	Femal
	N=341	N=390	N=191	N=405	N=528	N=202	N=922	N=645	N=614	N=798	N=994	N=10
Course requirements												
Algebra	28	33	21	22	23	14	27	26	30	20	22	27
Biology	81	80	75	52	61	59	76	72	64	59	63	72
Chemistry	76	84	69	59	66	56	75	73	68	61	61	77
Noncourse requirements												
American Nurses' Association exam[2]	[4]	74	74	76	[5]69	71	[6]73	[4]	64	75	[7]70	[8]77
College Board exam	25	10	8	9	16	4	14	21	12	8	12	13
High school transcripts	33	22	14	17	25	17	25	33	19	16	21	24
National League for Nursing exam[3]	87	59	59	67	71	56	69	84	52	62	65	71

[1] Entries are percentage of respondents who selected each requirement.

[2] Bogus examination.

[3] Actual examination.

[4] Not included on Pittsburgh Survey.

[5] Excludes Pittsburgh blacks, N=224.

[6] Excludes Pittsburgh whites, N=581.

[7] Excludes Pittsburgh males, N=670.

[8] Excludes Pittsburgh females, N=738.

Table 46.—Median estimated weekly starting salaries of occupations[1] (Pittsburgh)

Occupational categories	Total group	Race groups		Sex groups		Race/sex subgroups				Actual starting salary
		Blacks	Whites	Males	Females	Black		White		
						Males	Females	Males	Females	
	N=645	N=304	N=340	N=320	N=325	N=152	N=152	N=168	N=173	
Laundry worker	$103	$106	$101	$105	$100	$107	$101	$106	$ 98	$ 70
Secretary	152	154	150	157	148	152	156	164	142	103
High school teacher	175	171	180	180	173	172	170	187	180	163
Registered nurse	176	178	171	177	171	176	176	177	164	157
Medical doctor	236	259	225	237	224	260	250	244	209	202
Own desired occupation	182	197	170	207	160	215	170	197	153	NA
RN minus OWN occupation[2]	−6	−19	+1	−30	+11	−39	+6	−20	+11	NA
Actual RN minus OWN[3]	−25	−40	−13	−50	−3	−58	−13	−40	+4	NA

[1] All entries rounded to nearest dollar amount.

[2] Minus sign indicates students' occupational choice earned more than RN.

[3] Based on figures obtained from the Pittsburgh Chamber of Commerce, the Pittsburgh Federation of Teachers, the Pennsylvania Nurses Association and the Pennsylvania State Bureau of Employment.

NA=Not applicable.

Table 47.—Median estimated weekly starting salaries of occupations (Tallahassee)[1]

Occupational categories	Total group	Race groups		Sex groups		Race/sex subgroups				Actual starting salary[2]
						Black		White		
		Blacks	Whites	Males	Females	Males	Females	Males	Females	
Laundry worker	$ 85	$ 70	$ 85	$ 85	$ 70	$ 85	$ 70	$ 85	$ 70	$ 95
Secretary	145	145	145	145	145	145	145	145	145	105
Registered nurse	165	165	165	165	165	165	165	165	165	146
High school teacher	145	145	145	145	145	145	145	145	145	154
Medical doctor (intern)	200	200	200	200	200	200	200	200	200	235
Own desired occupation	200	200	200	220	185	200	200	220	185	NA
RN minus OWN occupation[3]	−35	−35	−35	−55	−20	−35	−20	−55	−20	NA
Actual RN minus OWN[3]	−54	−54	−54	−74	−54	−54	−54	−74	−39	NA

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[1] All salary estimates rounded to nearest whole dollar.

[2] Salaries quoted by the Florida State Department of Personnel for 1973.

[3] Minus sign indicates students expected to earn more than RN.

NA=Not applicable.

Table 48.—Median estimated weekly starting salaries of occupations[1] (Arizona)

Occupational categories	Total group N=798	Race groups			Sex groups		Race/sex subgroups						Actual starting salary[2]
							Indian		Chicano		White		
		Indians	Chicano	White	Male	Female	Male	Female	Male	Female	Male	Female	
		N=405	N=202	N=191	N=385	N=413	N=184	N=221	N=110	N=92	N=91	N=100	
Laundry worker	$ 85	$ 85	$ 70	$ 85	$ 85	$ 70	$ 85	$ 70	$ 85	$ 70	$ 85	$ 70	$ 91
Secretary	145	165	145	125	145	145	165	165	145	145	145	125	108
High school teacher	145	165	145	145	165	145	165	165	165	145	145	145	162
Registered nurse	165	185	165	165	165	165	185	185	165	165	165	165	158
Medical doctor	220	220	200	200	220	200	220	220	220	200	220	200	210
OWN occupation	185	200	185	165	200	165	200	185	200	145	185	145	NA
RN minus OWN occupation[3]	–20	–15	–20	00	–35	00	–15	00	–35	+20	–20	+20	NA
Actual RN minus OWN[3]	–27	–42	–27	–7	–42	–7	–42	–27	–42	+13	–27	+13	NA

[1] Medians rounded to nearest whole dollar amount.

[2] Salaries quoted by Arizona Department of Personnel and Arizona Nurses Association.

[3] Minus sign indicates that RN<OWN, plus indicates OWN<RN.

NA=Not applicable.

Table 49.—Distribution of tasks perceived as most frequently performed by hospital duty nurses (Pittsburgh)[1]

Nursing tasks	Total group	Race groups		Sex groups		Race/sex groups			
		Blacks	Whites	Males	Females	Black		White	
						Males	Females	Males	Females
	N=645	N=304	N=341	N=320	N=325	N=152	N=152	N=168	N=173
Chart patient progress records	45	49	39	44	48	48	51	34	45
Give shots	41	41	41	38	43	39	43	36	46
Take temperatures	38	39	37	36	40	38	40	34	40
Keep patient progress records	34	29	41	39	30	34	24	45	37
Take blood pressure	32	40	26	32	32	36	48	28	24
Collect specimens	31	36	24	34	26	40	32	29	19
Record diagnostic tests	25	21	29	28	23	26	16	30	28
Dress surgical wounds	24	25	25	24	26	26	24	21	28
Schedule routine diagnostic tests	23	22	24	24	23	26	18	22	27
Supervise nurses and nurses aides	18	17	20	15	22	14	20	15	25
Bathe patients	18	20	17	20	17	21	19	18	15
Interpret medical treatment to patients	17	20	26	17	18	19	20	14	16
Make beds	16	16	16	16	16	16	16	16	16
Take medical histories	17	11	20	17	15	11	11	21	19
Position patients	14	11	16	13	14	9	13	17	14
Feed patients	12	11	14	13	12	11	11	14	13
Empty bedpans	12	11	13	12	12	9	13	14	12
Teach nursing students	10	8	12	10	10	9	7	11	13
Inspect open wounds	9	7	11	11	8	7	7	14	8
Attend professional conferences	7	11	4	6	9	9	13	3	5
Keep ward clean	6	6	6	7	5	7	6	8	5
Conduct research	6	5	6	5	6	4	6	7	6
Dress patients	4	4	5	4	4	3	4	5	5
Comfort patient's family	4	6	2	3	5	5	8	8	2

Give backrubs	4	3	4	4	4	3	3	5	4
Give enemas	4	4	4	4	4	5	4	4	4
Weigh patients	4	5	3	5	3	6	3	4	2
Irrigate wounds	3	2	4	3	3	2	2	3	4
Turn patients	3	1	5	3	3	1	1	5	4
Examine eyes/ears	2	3	2	2	2	3	3	1	2
Plan nursing care with family	2	1	3	2	3	1	2	2	4
Supervise janitorial staff	2	1	4	2	2	1	1	4	4
Discharge patients	2	3	2	3	1	3	2	2	1
Explain nursing procedures to relatives	2	2	2	1	3	1	3	1	2
Irrigate eyes/ears	1	0	2	1	1	—	1	2	2

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[1] Entries represent percentages of students choosing that task, rounded to the nearest whole percent.

Table 50.—Mean pleasantness ratings of the 25 least selected nursing tasks (Pittsburgh)

Nursing tasks	Total group	Race groups		Sex groups		Race/sex subgroups			
		Black	White	Male	Female	Black		White	
	N=645	N=304	N=341	N=320	N=325	Male N=152	Female N=152	Male N=168	Femal N=17
Bathe patients	–45	–44	–48	–49	–42	–51	–37	–49	–45
Interpret medical treatment to patients	+19	+16	+21	+10	+27	+15	+18	+08	+35
Make beds	–17	–18	–16	–25	–10	–24	–12	–26	–08
Take medical histories	+39	+36	+41	+33	+45	+39	+34	+27	+55
Position patients	+13	+07	+19	–00	+26	–01	+14	+01	+36
Feed patients	+15	+08	+21	+08	+20	+06	+09	+11	+30
Empty bedpans	–85	–80	–89	–82	–88	–77	–84	–86	–91
Teach nursing students	+41	+49	+53	+44	+58	+48	+50	+40	+66
Inspect open wounds	–36	–35	–38	–33	–40	–26	–43	–39	–38
Attend professional conferences	+12	+09	+15	+13	+12	+14	+03	+11	+19
Keep ward clean	–25	–21	–28	–27	–23	–22	–20	–33	–24
Conduct research	+44	+31	+54	+40	+46	+36	+25	+43	+64
Dress patients	–10	–15	–05	–18	–03	–23	–08	–14	–03
Comfort patient's family	+12	+13	+50	+03	+15	+15	+10	–09	+19
Give backrubs	+14	+07	+21	+06	+23	+05	+09	+08	+34
Give enemas	–56	–44	–65	–48	–62	–35	–53	–59	–71
Weigh patients	+18	+19	+15	+07	+27	+19	+27	+02	+27
Irrigate wounds	–33	–31	–34	–26	–38	–24	–38	–29	–38
Turn patients	–08	–12	+03	–13	+04	–16	–09	–10	+16
Examine eyes/ears	+23	+30	+17	+23	+23	+36	+24	+12	+23
Plan nursing care with family	+43	+44	+42	+34	+51	+41	+47	+29	+55
Supervise janitorial staff	–17	–14	–19	–21	–13	–19	–09	–23	–16
Discharge patients	+62	+59	+65	+58	+65	+51	+66	+65	+64
Explain nursing procedures to relatives	+31	+31	+31	+29	+33	+35	+26	+23	+39
Irrigate eyes/ears	–17	–09	–23	–14	–19	–05	–13	–22	–24

Table 51.—Mean pleasantness rating of most frequently performed nursing tasks (Pittsburgh)

Tasks chosen by students	Race groups			Sex groups	
	Black	White	p	Male	Female
Chart patient progress records	+44	+40		+35	+48
Give shots	−09	−11		−02	−23
Take temperatures	+46	+41		+37	+50
Keep patient progress records	+49	+36		+33	+51
Take blood pressure	+43	+42		+35	+49
Average rating of top five tasks	+34	+30		+28	+35

[1] $p < .01$ (two-tailed).

Table 52.—Distribution of tasks perceived as most frequently performed by hospital duty nurses (Tallahassee)[1]

Nursing tasks	Total group N=614	Race groups		Sex groups		Race/sex subgroups			
						Black		White	
		Blacks	Whites	Males	Females	Males	Females	Males	Female
		N=224	N=390	N=289	N=325	N=94	N=130	N=195	N=195
Administer medication	58	50	63	61	56	55	46	63	63
Give shots	52	63	47	52	55	68	60	44	51
Take temperatures	46	47	45	47	45	49	46	46	44
Take blood pressure	37	44	33	37	37	45	43	33	33
Collect specimens	33	43	27	33	32	49	31	25	28
Assist in operating room	32	47	24	33	32	52	43	23	25
Chart progress records	30	32	28	26	32	35	29	22	34
Bathe patients	24	27	23	27	22	31	24	25	21
Dress surgical wounds	19	22	19	21	18	28	19	17	21
Feed patients	17	14	18	17	17	18	12	21	14
Attend staff meetings	6.7	11.6	3.8	4.8	8.3	5.3	16.1	4.6	3.1
Comfort patient's family	3.3	5.4	2.0	3.5	3.1	6.4	4.6	2.0	2.0
Conduct research	1.9	2.2	1.8	3.1	0.9	3.2	1.5	3.1	0.5
Discharge patient	4.2	6.7	2.8	3.5	4.9	4.2	8.5	3.1	2.6
Discuss nursing care with doctor	7.2	7.6	6.9	7.3	7.1	9.6	6.1	6.1	7.7
Dress patient	12.2	18.3	8.7	15.6	9.2	24.5	13.8	11.3	6.1
Empty bedpans	10.4	6.7	12.6	9.0	11.7	5.3	7.7	10.8	14.4
Give backrubs	2.1	3.1	1.5	1.7	2.5	3.2	3.1	1.0	2.0
Give enemas	2.9	2.7	3.1	2.8	3.1	1.1	3.8	3.6	2.6
Insert catheters	1.9	2.2	1.8	2.1	1.8	2.1	2.3	2.0	1.5
Inspect open wounds	3.1	4.0	2.6	3.1	3.1	2.1	5.4	3.6	1.5
Interpret medical treatments to patients	7.2	11.2	4.9	7.6	5.8	13.8	9.2	4.6	5.1
Irrigate eyes and ears	0.8	1.3	0.5	1.4	0.3	2.1	0.8	1.0	—
Keep ward clean	7.5	6.7	7.9	10.7	4.6	7.4	6.1	12.3	3.6
Make beds	14.3	12.0	15.6	10.5	14.5	11.7	12.3	15.4	15.9

Monitor post-surgical drainage tubes	5.7	1.3	8.2	6.2	5.2	2.1	0.8	8.2	8.2
Plan nursing care with family	2.1	2.2	2.0	2.8	1.5	4.2	0.8	2.0	2.0
Position patients in beds, chairs, etc.	9.6	8.5	10.3	9.3	9.8	10.6	6.9	8.7	11.8
Record diagnostic tests	13.3	14.3	12.8	16.6	10.5	20.2	10.0	14.9	10.8
Schedule patients for routine tests	12.5	10.7	13.6	11.8	13.5	9.6	11.5	12.3	14.9
Start and monitor intravenous injections	8.6	2.7	12.0	6.2	10.8	4.2	1.5	7.2	16.9
Supervise duties of janitorial staff	0.6	0.9	0.5	0.7	0.6	1.1	0.8	0.5	0.5
Supervise nurses aides	12.4	13.4	11.8	13.1	11.7	17.0	10.8	11.3	12.3
Take patient's medical history	11.9	7.6	14.4	10.4	7.1	10.6	5.4	10.3	8.2
Teach nursing students and aides	6.8	8.0	6.1	6.9	6.8	10.6	6.1	5.1	7.2
Weigh patients	3.3	3.1	3.3	4.1	2.5	3.2	3.1	4.6	2.0

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[1] Entries are percentage of respondents checking each task.

Table 53.—Mean pleasantness ratings of ten most frequently checked nursing tasks (Tallahassee)

Ten most frequently checked tasks	Total group N=614	Race groups			Sex groups	
		Blacks N=224	Whites N=390	p	Males N=289	Females N=325
Administer medication	+16	+33	+ 6	[1]	+11	+19
Give shots	−17	− 4	−26	[1]	−11	−24
Take temperatures	+26	+50	+14	[1]	+18	+33
Take blood pressure	+26	+40	+18	[1]	+21	+31
Collect specimens	−49	−31	−60	[1]	−51	−48
Average of top five tasks	00	+18	−10	—	−02	+02
Assist in operating room	−15	−12	−17	—	−14	−16
Chart progress records	+27	+44	+18	—	+18	+35
Bathe patients	−35	−34	−38	—	−35	−36
Dress surgical wounds	−34	−32	−36	—	−31	−36
Feed patients	− 3	+ 4	− 8	—	−10	+ 3

[1] $p < .01$ (two-tailed).

Table 54.—Mean pleasantness ratings of nursing tasks (Tallahassee)

Nursing tasks	Total group	Race groups		Sex groups		Race/sex subgroups			
		Black	White	Male	Female	Black		White	
						Male	Female	Male	Femal
	N=614	N=224	N=390	N=289	N=325	N=94	N=130	N=195	N=19
Attend staff meetings	+06	+33	−06	+02	+09	+29	+36	−06	−07
Comfort patient's family	+09	+35	−02	−02	+20	+28	+39	−13	+06
Conduct research	+37	+23	+46	+30	+42	+23	+24	+36	+54
Discharge patients	+58	+55	+59	+50	+63	+50	+59	+51	+66
Discuss nursing care with doctor	+30	+43	+26	+21	+40	+29	+53	+21	+32
Dress patients	−20	−12	−21	−26	−12	−28	−01	−23	−19
Empty bedpans	−79	−62	−88	−79	−79	−64	−60	−84	−91
Feed patients	−03	+04	−08	−10	+03	+01	+07	−14	−02
Give backrubs	+03	+08	+03	−07	+13	00	+13	−07	+13
Give enemas	−50	−26	+64	−48	−53	−27	−25	−58	−69
Insert catheters	−49	−32	−57	−41	−54	−31	−33	−46	−68
Inspect open wounds	−49	−47	−52	−44	−52	−48	−46	−45	−59
Interpret medical treatments to patients	+13	+19	+11	+08	+17	+17	+20	+09	+14
Irrigate eyes/ears	−21	−10	−26	−23	−18	−16	−04	−24	−28
Keep ward clean	−30	−07	−39	−41	−18	−19	00	−52	−28
Make beds	−24	00	−36	−33	−15	−07	+04	−45	−27
Monitor drainage tubes	−27	−15	−32	−26	−28	−25	−09	−23	−40
Plan nursing care with family	+21	+48	+21	+20	+40	+39	+54	+13	+30
Position patients	+11	+24	+05	+02	+20	+08	+34	+01	+09
Record diagnostic tests	+21	+35	+15	+16	+24	+35	+36	+11	+18
Schedule routine tests	+23	+43	+16	+18	+31	+34	+49	+14	+19
Start and monitor intravenous injections	−14	−10	−16	−09	−17	−07	−12	−10	−22

Table 54.—Mean pleasantness ratings of nursing tasks (Tallahassee)—continued

Nursing tasks	Total group	Race groups		Sex groups		Race/sex subgroups			
		Black	White	Male	Female	Black		White	
						Male	Female	Male	Fema
	N=614	N=224	N=390	N=289	N=325	N=94	N=130	N=195	N=19
Supervise janitors	−26	−07	−36	−25	−26	−01	−10	−35	−37
Supervise nurses' aides	+26	+43	+19	+21	+30	+40	+44	+14	+23
Take patient's medical history	+24	+37	+17	+17	+29	+38	+36	+09	+25
Teach nursing students	+30	+40	+24	+20	+38	+29	+47	+18	+32
Weigh patients	+ 9	+27	−01	−03	+19	+08	+40	−06	+04

Table 55.—Mean pleasantness scores of tasks most frequently performed by actual duty nurses (Tallahassee)

Nursing tasks	Percent of nurses selecting tasks	Student mean pleasantness ratings					
		Race groups			Sex groups		
		Blacks	Whites		Males	Females	
		N=224	N=390	p	N=484	N=325	
		MPS	MPS		MPS	MPS	
Administer medications	42	+33	+ 6	[1]	+11	+19	−
Chart progress records	40	+44	+18	[1]	+18	+35	
Interpret medical treatment	38	+19	+12	—	+ 9	+17	−
Discuss nursing care treatment with doctor	36	+43	+26	[1]	+21	+40	
Plan nursing care with family	17	+48	+21	[1]	+20	+40	

[1] p <.01 (two-tailed).

Table 56.—Distribution of tasks perceived as most frequently performed by hospital duty nurses (Arizona)[1]

Nursing tasks	Total group	Race groups			Sex groups		Race/sex subgroups					
							Indian		Chicano		White	
		Indians	Chicano	White	Male	Female	Male	Female	Male	Female	Male	Female
	N=798	N=405	N=202	N=191	N=385	N=413	N=184	N=221	N=110	N=92	N=91	N=100
Take temperatures	48	22	49	58	47	49	43	42	50	47	48	67
Give shots	43	43	44	45	41	45	48	38	35	53	34	55
Administer medications	42	31	50	54	34	49	26	36	35	70	49	59
Take blood pressure	30	32	28	28	28	32	33	28	28	28	23	33
Chart patient progress records	28	15	30	26	26	31	28	33	27	33	21	31
Assist in operating room	28	15	30	21	25	30	28	31	24	38	20	21
Collect specimens	19	8	24	20	17	20	15	15	21	27	16	23
Dress surgical wounds	17	9	17	16	17	17	18	17	19	15	13	19
Interpret medical treatments	18	12	13	5	12	23	16	30	10	17	7	4
Bathe patients	16	7	19	19	16	16	13	14	17	20	20	16
Attend staff meeting	6.9	10.1	1.5	5.6	3.9	9.7	4.3	14.9	9.0	2.2	6.6	5.0
Comfort patient's family	3.3	4.2	1.0	3.7	3.9	2.7	4.8	3.6	9.0	1.1	5.4	2.0
Conduct research	0.5	1.0	2.0	4.7	1.0	1.0	3.8	4.1	2.7	1.1	4.3	5.0
Discharge patients	3.3	3.7	0.5	5.2	2.9	3.6	2.2	5.0	0.9	—	6.6	4.0
Discuss nursing care with doctor	9.1	10.4	4.4	11.5	10.4	8.0	12.5	8.6	4.5	4.3	13.2	10.0
Dress patients	6.9	8.4	3.5	7.3	7.3	6.5	8.1	8.6	5.4	1.1	7.7	9.0
Empty bedpans	10.0	7.6	10.9	14.1	9.9	10.2	5.4	9.5	9.1	3.0	19.8	13.0
Feed patients	15.5	15.3	12.4	19.4	20.0	11.4	20.6	10.9	12.7	4.5	26.4	13.0
Give backrubs	2.6	2.5	3.0	2.6	2.1	3.1	1.6	3.2	2.7	3.3	2.2	3.0
Give enemas	2.1	0.7	2.5	5.2	2.1	2.2	1.1	—	1.8	1.4	4.4	6.0

See footnote at end of table.

Table 56.—Distribution of tasks perceived as most frequently performed by hospital duty nurses (Arizona)[1]—continued

Nursing tasks	Total group N=798	Race groups			Sex groups		Race/sex subgroups					
							Indian		Chicano		White	
		Indians	Chicano	White	Male	Female	Male	Female	Male	Female	Male	Female
		N=405	N=202	N=191	N=385	N=413	N=184	N=221	N=110	N=92	N=91	N=100
Insert catheters	2.1	3.5	0.5	1.0	1.0		1.1	0.9	0.9	—	1.1	1.0
Inspect open wounds	5.3	5.2	5.4	5.2	6.7	3.9	7.1	3.6	6.4	4.3	6.6	4.0
Irrigate eyes/ears	2.0	3.2	1.0	0.5	2.9	1.2	5.4	1.4	0.9	1.1	—	1.0
Keep ward clean	11.3	14.1	7.4	9.4	11.2	11.4	13.0	14.9	9.1	5.4	9.9	9.0
Make beds	8.3	9.6	6.9	11.0	7.8	8.9	18.5	19.0	6.4	7.6	12.1	10.0
Monitor drainage tubes	3.3	3.0	4.4	2.6	3.4	3.1	3.3	2.7	2.7	7.6	4.3	1.0
Plan nursing care with family	3.9	6.4	—	2.6	3.4	4.6	5.4	7.2	—	—	2.2	3.0
Position patient in bed, chair, etc.	12.4	9.9	14.8	15.2	12.5	12.3	12.0	8.1	11.8	17.4	14.3	16.0
Record diagnostic tests	14.2	16.3	7.9	16.2	15.8	12.6	17.9	14.9	9.1	7.6	19.8	13.0
Schedule patients for routine tests	10.6	8.6	10.9	14.7	12.2	9.2	9.2	8.1	42.7	41.3	18.7	11.0
Start and monitor intravenous injections	6.5	5.7	8.4	6.3	5.2	7.7	5.4	5.9	5.4	12.0	4.3	8.0
Supervise janitorial staff	0.8	0.5	—	2.1	1.0	0.5	1.1	—	—	—	2.2	2.0
Supervise nurses' aides	11.6	14.1	9.4	8.9	9.9	13.3	11.4	16.3	6.4	13.0	11.0	7.0
Take medical history	8.8	9.6	5.9	9.9	9.1	8.5	11.4	8.1	3.6	8.7	4.3	9.0
Teach nursing students	8.1	7.2	8.4	9.9	8.8	9.9	9.8	5.0	6.4	10.9	9.9	10.0
Weigh patients	5.0	6.7	2.5	4.2	5.7	4.4	8.1	5.4	2.7	2.2	4.3	4.0

[1] Entries are percentage of respondents checking each task.

Table 57.—Mean pleasantness ratings of most frequently performed nursing tasks (Arizona)[1]

Nursing tasks	Total group N=798	Race groups			Sex groups		Race/sex subgroups					
							Indian		Chicano		White	
		Indians	Chicano	White	Male	Female	Male	Female	Male	Female	Male	Female
		N=405	N=202	N=191	N=385	N=413	N=184	N=221	N=110	N=92	N=91	N=100
Tasks respondents thought nurses perform												
Give shots	+09	+18	−17	−16	+09	+08	+25	+12	−07	−29	−25	−07
Take temperatures	+38	+22	+35	+14	+29	+47	+16	+28	+35	+35	+04	+22
Administer medications	+22	+28	+18	+17	+17	+27	+20	+34	+15	+23	+12	+23
Take blood pressures	+34	+40	+31	+28	+30	+39	+30	+47	+32	+30	+13	+36
Chart patient progress records	+31	+32	+35	+24	+21	+42	+19	+43	+25	+48	+16	+32
Average rating	(+27)	(+28)	(+20)	(+13)	(+21)	(+33)	(+22)	(+33)	(+20)	(+21)	(+05)	(+21)
Tasks nurses say they do												
Administer medication	+22	+28	+18	+17	+17	+27	+20	+34	+15	+23	+12	+23
Chart patient orpgress records	+31	+32	+35	+24	+21	+42	+19	+43	+25	+48	+16	+32
Discuss nursing care with doctor	+21	+17	+30	+28	+18	+26	+09	+22	+28	+32	+22	+33
Interpret medical treatment for patients	+18	+25	+14	+09	+12	+22	+19	+31	+13	+15	+06	+12
Plan nursing care	+31	+34	+39	+29	+27	+40	+26	+40	+36	+42	+15	+40
Average rating	(+25)	(+27)	(+27)	(+21)	(+19)	(+31)	(+19)	(+34)	(+23)	(+32)	(+14)	(+28)

[1] All ratings are those assigned to tasks by student respondent groups.

Table 58.—Comparative analysis: Tasks perceived as most frequently performed by hospital duty nurses (Pittsburgh, Tallahassee, and Arizona)[1]

Tasks	White respondents			Race groups				Regions			Sex groups	
	Pgh	Talla	Arizona	Indian	Black	Chicano	White	Pgh	Talla	Arizona	Males	Females
	N=341	N=390	N=191	N=405	N=528	N=202	N=922	N=645	N=614	N=798	N=994	N=1063
Give shots	41	47	43	43	51	44	44	41	53	43	43	47
Administer medications[2]	NA	63	42	31	[3]50	50	[4]45	NA	56	42	[5]46	[6]52
Take temperatures	37	45	48	22	42	49	43	38	46	48	43	45
Take blood pressure	26	33	30	32	42	28	30	32	37	30	32	34
Chart patient progress records	39	28	28	15	34	30	32	45	30	28	32	36
Assist in operating room[2]	NA	24	28	15	[3]47	30	[4]25	NA	32	28	[5]28	[6]31
Collect specimens	24	27	19	8	39	24	23	31	33	19	27	25
Dress surgical wounds	25	19	17	9	24	17	21	24	19	17	20	20

[1] Entries are percentages.
[2] Tasks also chosen by nurses.
[3] Task not included on Pittsburgh Survey (N=224).
[4] Task not included on Pittsburgh Survey (N=581).
[5] Task not included on Pittsburgh Survey (N=674).
[6] Task not included on Pittsburgh Survey (N=738).

Table 58.—Mean pleasantness ratings of most frequently performed nursing tasks (Pittsburgh, Tallahassee and Arizona)

Tasks	White respondents			Race groups				Regions			Sex groups	
	Pgh	Talla	Arizona	Indian	Black	Chicano	White	Pgh	Talla	Arizona	Males	Femal
	N=341	N=390	N=191	N=405	N=528	N=202	N=922	N=645	N=614	N=798	N=994	N=10
Give shots	−11	−26	−16	+18	−07	−17	−17	+10	−18	+ 9	−14	−20
Administer medications	NA	+06	+17	+28	+33	+18	+ 9	NA	+15	+22	+13	+23
Take temperatures	+41	+14	+14	+22	+48	+35	+21	+43	+26	+38	+28	+42
Take blood pressure	+42	+18	+28	+40	+42	+31	+26	+42	+26	+34	+28	+40
Chart patient progress records	+40	+18	+24	+32	+43	+35	+22	+42	+23	+31	+24	+42
Assist in operating room	NA	−17	−28	− 7	−14	−28	−20	NA	−15	−16	−12	−20
Collect specimens	−46	−60	−50	−16	−31	−38	−51	−39	−49	−28	−40	−37
Dress surgical wounds	−21	−21	−36	−18	−14	−38	−27	−21	−34	−27	−26	−25

Table 60.—Relevant courses taken by high school students (Pittsburgh)[1]

	Total group N=645	Race groups		Sex groups		Race/sex subgroups			
						Black		White	
		Blacks N=304	Whites N=341	Males N=320	Females N=325	Males N=152	Females N=152	Males N=168	Femal N=12
Courses taken prior to senior year									
Algebra	67	66	67	73	61	69	64	76	59
Biology	80	80	79	80	79	81	79	80	79
Chemistry	44	35	53	48	40	41	29	55	50
Courses taken in senior year									
Algebra	7	8	6	8	6	11	6	7	6
Biology	12	10	13	12	11	11	9	13	13
Chemistry	14	20	10	17	12	22	18	13	6
Courses completed by graduation									
Algebra	74	74	73	81	67	80	70	83	65
Biology	91	90	92	92	90	92	88	93	92
Chemistry	58	55	63	65	52	63	47	68	56

[1] Entries are percentages of respondents who had taken or were taking respective courses.

Table 61.—Relevant courses taken by high school students (Tallahassee)[1]

	Total group N=614	Race groups		Sex groups		Race/sex subgroups			
						Black		White	
		Blacks	Whites	Males	Females	Males	Females	Males	Femal
		N=224	N=390	N=289	N=325	N=94	N=130	N=195	N=19
					Courses taken prior to senior year				
Algebra	70	42	86	69	71	43	42	82	90
Biology	91	83	95	89	93	80	86	94	97
Chemistry	34	15	46	41	28	18	13	53	38
					Courses taken in senior year				
Algebra	9	8	10	12	70	11	5	12	9
Biology	6	8	4	7	4	11	7	6	3
Chemistry	9	6	11	10	9	9	4	11	12
					Courses completed by graduation				
Algebra	79	50	96	81	78	54	47	94	99
Biology	97	91	99	96	97	91	93	100	100
Chemistry	43	21	57	51	37	27	17	64	50

[1] Entries are percentages of respondents who had taken or were taking respective courses.

Table 62.—Relevant courses taken by high school students (Arizona)[1]

	Total group N=798	Race groups			Sex groups		Race/sex subgroups					
							Indian		Chicano		White	
		Indians	Chicano	White	Male	Female	Male	Female	Male	Female	Male	Female
		N=405	N=202	N=191	N=385	N=413	N=184	N=221	N=110	N=92	N=91	N=100
Courses taken prior to senior year												
Algebra	60	69	50	52	65	55	79	60	44	57	64	42
Biology	77	83	64	76	80	73	89	78	61	67	85	69
Chemistry	30	23	39	34	36	23	30	17	42	36	43	26
Courses taken in senior year												
Algebra	9	12	3	7	9	8	11	13	4	3	12	3
Biology	9	8	12	8	10	9	8	9	14	11	8	8
Chemistry	14	19	6	13	13	16	16	12	5	9	15	10
Courses completed by graduation												
Algebra	69	81	53	59	74	63	90	73	48	60	76	45
Biology	86	91	76	84	90	82	97	87	75	78	93	77
Chemistry	44	42	45	47	49	39	46	29	47	45	58	36
General Science	62	74	51	49	70	56	82	67	58	43	59	40

[1] Entries are percentages of respondents who had taken or were taking respective courses.

Table 61.—Distributions of family size (Pittsburgh)[1]

Number of siblings	Total group	Race groups		Sex groups		Race/sex subgroups			
		Black	White	Male	Female	Black		White	
						Male	Female	Male	Female
	N=645	N=304	N=341	N=320	N=325	N=152	N=152	N=168	N=173
None	11.6	11.8	11.5	13.1	10.2	7.9	9.6	12.3	10.7
One	23.1	22.4	23.7	24.9	21.3	14.1	19.8	24.7	22.6
Two	28.8	29.7	28.0	27.3	16.6	15.9	30.9	26.5	29.6
Three	16.8	14.8	18.4	16.6	16.9	8.8	14.0	17.3	19.5
Four	10.4	9.9	10.9	10.0	10.8	4.8	11.0	11.1	10.7
Five	5.8	7.2	4.7	4.8	6.8	3.1	8.8	4.3	5.8
More than five	3.4	4.2	2.8	3.1	3.7	1.3	5.9	3.7	1.9
No response	9.5	13.5	5.9	9.7	9.2	16.4	10.5	3.6	8.1

[1] Entries are percentages.

Table 64.—Distributions of family size (Tallahassee)[1]

Number of siblings	Total group	Race groups		Sex groups		Race/sex subgroups			
						Black		White	
		Black	White	Male	Female	Male	Female	Male	Fema
	N=614	N=224	N=390	N=289	N=325	N=94	N=130	N=195	N=19
None	14.5	11.8	15.9	13.8	15.1	11.0	12.5	15.1	16.7
One	19.0	12.9	22.4	20.1	18.1	11.0	14.3	24.4	20.5
Two	30.0	30.9	29.5	29.9	30.1	34.1	28.6	27.9	31.1
Three	16.5	20.1	14.5	18.5	14.7	21.9	18.7	16.9	12.2
Four	11.7	13.4	10.8	11.8	11.6	12.2	14.3	11.6	10.0
Five	5.9	8.2	4.5	4.7	7.5	9.8	8.9	2.3	6.7
More than five	2.9	4.1	2.3	1.2	2.7	—	2.7	1.7	2.8
Total percent	100.0	100.0	100.0	100.0	100.0	10.00	100.0	100.0	100.0
No response	11.1	13.4	9.7	12.1	12.1	10.1	13.8	11.8	7.7

[1] Entries are percentages.

Table 65.—Distributions of family size (Arizona)[1]

Number of siblings	Total group	Race groups			Sex groups		Race/sex subgroups					
							Indian		Chicano		White	
		Indians	Chicano	White	Male	Female	Male	Female	Male	Female	Male	Female
	N=798	N=405	N=202	N=191	N=385	N=413	N=184	N=221	N=110	N=92	N=91	N=100
None	7.3	5.1	3.5	15.8	7.9	6.7	6.8	3.7	3.7	3.3	15.3	16.3
One	12.6	6.7	13.1	24.6	13.0	12.2	8.5	5.2	9.3	17.6	27.1	22.4
Two	14.7	10.0	16.6	22.4	14.9	14.4	10.2	9.9	15.7	17.6	23.5	21.4
Three	22.4	24.2	24.6	16.4	23.6	21.4	23.9	24.4	28.7	19.8	16.5	16.3
Four	27.2	26.0	36.7	19.7	26.6	27.9	24.4	27.2	37.0	36.3	17.6	21.4
Five	11.0	19.5	4.0	0.5	10.6	11.4	19.3	19.7	4.6	3.3	—	1.0
More than five	4.8	8.5	1.5	0.5	3.5	6.0	6.8	9.9	0.9	2.2	—	1.0
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No response	3.4	3.9	1.5	4.2	4.1	2.7	4.3	3.6	1.8	1.1	6.6	2.0

[1] Entries are percentages.

Table 68.—Distributions of fathers' occupations (Pittsburgh)[1]

Occupation categories	Total group	Race groups		Sex groups		Race/sex subgroups			
		Black	White	Male	Female	Black		White	
						Male	Female	Male	Female
	N=645	N=304	N=341	N=320	N=325	N=152	N=152	N=168	N=173
Professional I	2.4	2.0	2.7	2.7	2.1	—	4.3	4.8	0.7
Professional II	3.6	2.5	4.5	2.7	4.2	2.7	2.2	2.8	5.5
Technical	1.4	0.5	2.1	1.2	1.7	0.9	—	1.4	2.8
Managerial	2.6	2.5	2.7	2.7	2.5	2.7	2.2	2.8	2.8
Skilled craftsman	9.2	6.9	10.6	7.8	10.8	6.3	7.5	8.3	13.1
Laborer	24.8	21.6	27.4	26.0	23.8	24.3	18.3	27.6	27.6
Clerical	9.4	8.3	9.2	8.9	9.6	9.0	7.5	9.0	9.7
Civil servant	30.3	41.7	22.9	32.9	27.5	44.2	38.7	24.8	20.7
Homemaker	1.0	—	1.7	0.4	1.7	—	—	0.7	2.8
Agricultural	1.2	1.0	1.4	1.2	1.3	—	2.2	2.1	0.7
Self-employed	13.6	12.7	14.0	12.4	15.0	9.0	17.2	14.5	13.8
Registered nurse	0.2	0.5	—	0.4	—	0.9	—	—	—
Other health professional	0.4	—	0.7	0.8	—	—	—	1.4	—
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No response	24.0	32.9	16.1	20.6	27.4	27.0	34.2	14.9	17.6

[1] Entries are percentages.

Table 67.—Distributions of fathers' occupations (Tallahassee)[1]

Occupation categories	Total group	Race groups		Sex groups		Race/sex subgroups			
		Black	White	Male	Female	Black		White	
						Male	Female	Male	Female
	N=614	N=224	N=390	N=289	N=325	N=94	N=130	N=195	N=195
Professional I	17.2	6.7	21.2	19.7	15.1	6.0	7.5	24.2	18.3
Professional II	16.3	11.8	16.9	14.0	18.2	20.0	6.0	9.9	23.2
Technical	4.3	0.8	5.8	4.8	3.9	—	1.5	6.8	4.9
Managerial	14.5	3.4	18.7	18.3	11.2	6.0	1.5	22.4	15.2
Skilled craftsman	5.4	5.0	5.8	5.2	5.6	4.0	6.0	6.2	5.5
Laborer	11.3	21.0	7.7	10.9	11.7	24.0	19.4	6.8	8.5
Clerical	3.8	7.6	2.8	2.2	5.2	2.0	10.0	2.5	3.0
Civil servant	11.3	33.6	3.4	10.0	12.5	30.0	35.8	3.7	3.0
Agricultural	5.4	1.7	6.7	4.3	6.5	2.0	3.0	5.6	7.9
Self-employed	9.0	5.0	10.4	9.6	8.7	4.0	6.0	11.2	9.8
Registered nurse	—	—	—	—	—	—	—	—	—
Other health professional	1.3	2.5	0.6	0.9	1.3	2.0	3.0	0.6	0.6
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No response	28.0	47.3	17.0	26.1	28.9	46.8	48.5	17.4	15.9

[1] Entries are percentages.

Table 68.—Distributions of fathers' occupations (Arizona)[1]

Occupation categories	Total group	Race groups			Sex groups		Race/sex subgroups					
							Indian		Chicano		White	
		Indians	Chicano	White	Male	Female	Male	Female	Male	Female	Male	Fema
	N=798	N=405	N=202	N=191	N=385	N=413	N=184	N=221	N=110	N=92	N=91	N=1
Professional I	2.0	1.5	3.6	0.6	1.9	2.1	1.2	1.8	2.5	4.5	1.2	—
Professional II	5.7	6.1	7.1	3.0	6.1	5.3	5.8	6.4	11.1	3.4	2.3	4.0
Technical	0.9	0.5	1.2	1.2	0.4	1.4	—	0.9	—	2.3	1.2	1.0
Managerial	1.5	2.5	0.6	1.2	1.5	1.4	3.5	1.8	—	1.1	1.2	1.0
Skilled craftsman	7.9	3.0	11.8	10.4	8.0	7.7	3.5	2.7	9.9	13.6	11.6	9.0
Laborer	34.7	26.9	43.8	34.1	36.4	33.3	32.6	22.7	40.7	46.6	34.9	34.0
Clerical	5.1	9.1	4.7	1.2	5.7	4.6	9.3	9.1	6.2	3.4	2.3	—
Civil servant	30.5	35.5	19.5	36.0	25.7	34.7	26.7	41.8	21.0	18.2	30.2	42.0
Homemaker	0.2	—	—	0.6	0.4	—	—	—	—	—	1.2	—
Agricultural	0.2	0.5	—	—	0.4	—	1.2	—	—	—	—	—
Self-employed	7.5	6.1	7.1	10.4	9.2	6.0	7.0	5.5	8.6	5.7	12.8	8.0
Registered nurse	—	—	—	—	—	—	—	—	—	—	—	—
Other health professional	3.8	8.1	0.6	1.2	4.2	3.5	9.3	7.3	—	1.1	1.2	1.0
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No response	33.7	52.1	11.4	18.3	34.0	34.4	54.0	50.7	11.0	12.0	22.5	15.0

[1] Entries are percentages.

Table 69.—Distributions of mothers' occupations (Pittsburgh)[1]

Occupation categories	Total group	Race groups		Sex groups		Race/sex subgroups			
		Black	White	Male	Female	Black		White	
						Male	Female	Male	Female
	N=645	N=304	N=341	N=320	N=325	N=152	N=152	N=168	N=173
Professional I	0.4	—	0.8	0.4	0.4	—	—	0.8	0.7
Professional II	6.7	7.4	5.7	7.1	6.3	6.0	8.8	8.2	3.6
Technical	4.2	4.8	3.8	4.6	3.6	6.0	3.5	3.3	3.6
Skilled craftsman	2.8	1.3	3.8	2.5	2.8	1.7	0.9	3.3	4.3
Laborer	0.8	—	1.5	—	1.6	—	—	—	2.9
Clerical	5.8	6.1	5.4	3.3	8.3	4.3	8.0	1.6	8.7
Civil servant	11.9	10.4	13.4	14.9	9.1	12.8	8.0	17.2	10.1
Homemaker	59.7	65.2	55.2	58.1	61.7	63.2	67.3	53.3	57.2
Agricultural	6.3	3.9	8.4	7.5	5.1	5.1	2.7	9.8	7.2
Self-employed	1.2	0.4	1.9	1.7	0.8	0.7	—	2.5	1.4
Other health professional	0.2	0.4	—	—	0.4	—	0.9	—	—
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No response	24.8	24.3	25.2	26.2	23.4	23.0	25.6	29.2	21.4

[1] Entries are percentages.

Table 70.—Distributions of mothers' occupations (Tallahassee)[1]

Occupation categories	Total group	Race groups		Sex groups		Race/sex subgroups			
		Black	White	Male	Female	Black		White	
						Male	Female	Male	Female
	N=614	N=224	N=390	N=289	N=325	N=94	N=130	N=195	N=195
Professional I	0.5	—	0.8	0.8	0.4	—	—	1.3	0.6
Professional II	10.8	8.4	11.6	8.4	12.6	11.1	7.1	7.8	15.4
Technical	2.2	1.5	2.9	3.4	1.2	2.2	—	3.9	1.9
Managerial	3.1	1.5	0.6	1.5	4.5	2.2	1.2	1.3	—
Skilled craftsman	3.1	2.3	3.8	3.7	2.8	4.4	1.2	3.9	3.7
Homemaker	43.8	31.3	48.7	43.5	43.9	35.6	29.8	46.1	51.2
Clerical	2.7	9.2	—	1.3	3.7	4.4	10.7	—	—
Civil servant	14.2	38.2	4.5	11.3	16.3	33.3	41.7	46.1	3.1
Agricultural	20.2	4.6	25.2	24.4	16.7	4.4	4.8	27.9	22.8
Self-employed	3.4	2.3	0.6	1.4	4.9	2.2	2.4	1.3	—
Registered nurse	—	—	—	—	—	—	—	—	—
Other health professional	0.1	—	0.3	—	0.3	—	—	—	0.6
Laborer	0.7	0.7	0.6	0.2	0.8	—	1.2	0.6	0.6
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No response	27.5	42.4	19.0	31.0	24.3	52.1	35.4	21.0	16.9

[1] Entries are percentages.

Table 71.—Distributions of mothers' occupations (Arizona)[1]

							Race/sex subgroups					
Occupation	Total group	Race groups			Sex groups		Indian		Chicano		White	
		Indians	Chicano	White	Male	Female	Male	Female	Male	Female	Male	Femal
	N=798	N=405	N=202	N=191	N=385	N=413	N=184	N=221	N=110	N=92	N=91	N=10
Professional I	0.2	0.3	—	—	—	0.3	—	0.8	—	—	—	—
Professional II	3.0	2.7	5.6	0.6	3.2	2.8	3.2	2.3	6.1	5.3	1.1	—
Technical	1.5	0.3	3.4	1.7	0.3	2.8	—	0.8	1.2	5.3	—	3.7
Managerial	0.3	—	1.1	—	0.6	—	—	—	2.4	—	—	—
Skilled craftsman	1.7	0.3	5.1	0.6	1.2	2.2	—	0.8	4.9	5.3	—	1.2
Laborer	2.4	1.0	3.4	4.0	2.0	2.8	0.6	1.5	3.7	3.2	3.2	4.9
Clerical	4.1	4.5	5.6	2.3	3.8	4.4	3.2	6.0	4.9	6.3	4.2	—
Civil servant	18.8	12.4	23.2	23.2	18.9	18.7	14.6	9.8	19.5	26.3	23.2	23.2
Homemaker	47.2	47.1	40.7	54.8	40.4	54.5	34.2	62.4	39.0	42.1	53.7	56.1
Agricultural	2.7	0.7	6.8	2.3	2.9	2.5	0.6	0.8	9.8	4.2	1.1	3.7
Self employed	0.3	0.7	—	—	—	0.6	—	1.5	—	—	—	—
Registered nurse	—	—	—	—	—	—	—	—	—	—	—	—
Other health professional	17.9	29.9	5.1	10.7	26.7	8.4	43.7	13.5	8.5	2.1	13.7	7.3
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No response	19.5	28.9	7.4	12.6	13.2	25.4	15.2	40.3	9.1	5.4	14.3	11.0

[1] Entries are percentages.

Table 72.—Distributions of fathers' education (Pittsburgh)[1]

Amount of education	Total group	Race groups		Sex groups		Race/sex subgroups			
		Black	White	Male	Female	Black		White	
						Male	Female	Male	Fema
	N=645	N=304	N=341	N=320	N=325	N=152	N=152	N=168	N=1
8 years or fewer	12.8	12.0	13.3	9.9	15.5	10.2	13.8	9.7	16.4
9–11 years	24.5	24.7	24.0	25.3	23.4	27.7	21.5	23.6	24.0
12 years	51.2	52.4	50.6	54.6	48.4	52.6	52.3	55.8	46.2
Some college	6.7	6.4	7.1	5.3	8.2	5.1	7.7	5.5	8.8
College graduate	4.1	3.7	4.4	3.9	4.3	3.6	3.8	4.2	4.7
Graduate school	0.7	0.7	0.6	1.0	0.3	0.7	0.8	1.2	—
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No response	7.4	12.2	3.2	6.5	8.2	9.9	14.5	3.5	2.8

[1] Entries are percentages.

Table 73.—Distributions of fathers' education (Tallahassee)[1]

Amount of education	Total group	Race groups		Sex groups		Race/sex subgroups			
		Black	White	Male	Female	Black		White	
						Male	Female	Male	Fema
	N=614	N=224	N=390	N=289	N=325	N=94	N=130	N=195	N=1
8 years or fewer	7.6	15.0	3.8	6.7	8.4	11.6	18.0	3.9	3.8
9–11 years	11.1	25.6	5.2	12.6	9.9	26.1	24.6	7.7	2.7
12 years	26.2	33.8	22.9	27.5	24.9	36.2	32.6	24.3	21.2
1–3 years college	14.3	10.2	16.1	12.3	16.1	10.2	10.2	13.3	19.0
College graduate	26.4	10.0	33.2	29.4	23.8	13.0	9.0	35.4	31.0
Graduate school	14.3	4.4	18.8	11.5	16.8	2.9	5.6	15.5	22.3
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No response	14.8	29.2	6.6	13.2	16.0	26.6	31.5	7.2	5.6

[1] Entries are percentages.

Table 74.—Distributions of fathers' education (Arizona)[1]

Amount of education	Total group	Race groups			Sex groups		Race/sex subgroups					
							Indian		Chicano		White	
		Indians	Chicano	White	Male	Female	Male	Female	Male	Female	Male	Femal
	N=798	N=405	N=202	N=191	N=385	N=413	N=184	N=221	N=110	N=92	N=91	N=10
8 years or fewer	47.3	52.2	57.6	30.6	46.0	48.6	50.0	54.4	56.2	59.2	29.3	31.8
9–11 years	17.6	20.2	12.1	19.4	14.4	20.9	14.9	25.4	10.1	14.5	18.3	20.4
12 years	21.5	19.7	18.8	27.1	24.9	18.3	24.6	14.9	21.3	15.8	29.3	25.0
Some college	8.7	6.1	6.7	14.1	8.8	8.6	7.9	4.4	5.6	7.9	13.4	14.8
College graduate	4.8	1.7	4.8	8.8	6.0	3.6	2.6	0.9	6.7	2.6	9.8	7.9
Graduate school	—	—	—	—	—	—	—	—	—	—	—	—
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No response	29.6	43.7	18.3	11.0	26.0	32.7	38.0	48.4	19.1	17.4	9.9	12.0

[1] Entries are percentages.

Table 75.—Background information: Mothers' education (Pittsburgh)[1]

Amount of education	Total group	Race groups		Sex groups		Race/sex subgroups			
		Black	White	Male	Female	Black		White	
						Male	Female	Male	Female
	N=645	N=304	N=341	N=320	N=325	N=152	N=152	N=168	N=173
8 years or fewer	7.3	6.5	8.2	4.3	10.1	3.6	9.3	4.9	10.9
9–11 years	24.7	25.5	23.9	22.0	27.3	21.7	29.3	22.6	24.8
12 years	57.7	56.8	58.6	62.2	53.6	60.9	52.9	62.8	55.2
Some college	7.2	8.6	5.7	7.9	6.5	11.6	5.7	4.9	6.7
College graduate	2.9	2.2	3.6	3.3	2.6	1.4	2.9	4.9	2.4
Graduate school	0.2	0.4	—	0.3	—	0.7	—	—	—
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No response	6.8	8.6	5.3	6.5	6.9	9.2	7.9	4.1	6.3

[1] Entries are percentages.

Table 76.—Background information: Mothers' education (Tallahassee)[1]

Amount of education	Total group	Race groups		Sex groups		Race/sex subgroups			
		Black	White	Male	Female	Black		White	
						Male	Female	Male	Female
	N=614	N=224	N=390	N=289	N=325	N=94	N=130	N=195	N=195
8 years or fewer	4.4	8.9	1.6	3.9	5.0	9.3	8.8	0.5	2.7
9–11 years	16.0	31.1	7.4	12.8	18.7	28.0	33.6	5.3	9.6
12 years	37.4	32.6	40.4	41.6	33.7	34.7	31.0	45.5	35.3
1–3 years college	15.5	10.0	18.9	15.7	15.3	12.0	8.0	17.6	19.8
College graduate	18.1	11.6	21.8	20.6	16.0	12.0	11.5	25.1	18.7
Graduate school	7.1	4.9	9.8	5.3	8.7	4.0	—	5.9	13.9
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No response	8.5	15.9	4.3	9.3	7.7	20.2	13.1	4.1	4.1

[1] Entries are percentages.

Table 77.—Background information: Mothers' education (Arizona)[1]

Amount of education	Total group	Race groups			Sex groups		Race/sex subgroups					
							Indian		Chicano		White	
		Indians	Chicano	White	Male	Female	Male	Female	Male	Female	Male	Female
	N=798	N=405	N=202	N=191	N=385	N=413	N=184	N=221	N=110	N=92	N=91	N=100
8 years or fewer	36.8	45.3	54.1	10.4	31.8	41.9	37.6	53.0	49.5	59.8	16.3	15.5
9–11 years	21.8	26.9	19.3	18.6	23.4	20.1	32.7	21.0	17.2	21.9	19.8	17.5
12 years	30.0	18.4	23.2	49.2	32.2	27.6	21.8	15.0	30.3	14.6	46.5	51.5
Some college	6.4	5.5	2.8	10.9	5.9	6.8	4.9	6.0	3.0	2.4	10.5	11.3
College graduate	4.9	3.5	0.5	10.9	6.6	3.2	3.0	4.0	—	1.2	18.6	4.1
Graduate school	0.2	0.5	—	—	—	0.4	—	1.0	—	—	—	—
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No response	29.2	50.4	10.4	4.2	25.7	32.4	45.1	55.2	10.0	10.9	5.5	3.0

[1] Entries are percentages.

Table 78.—Distributions of post-high school plans—financial (Pittsburgh)[1]

Amount of own financial support required after high school graduation	Total group	Race groups		Sex groups		Race/sex subgroups			
		Black	White	Male	Female	Black		White	
						Male	Female	Male	Female
	N=645	N=304	N=341	N=320	N=325	N=152	N=152	N=168	N=173
None	—	0.1	—	—	0.1	—	1.5	—	—
One-fourth	22.1	17.9	25.5	15.9	24.7	13.2	23.5	25.2	25.9
One-half	26.1	26.0	25.8	27.9	23.7	27.8	24.3	28.4	23.5
Three-fourths	23.8	25.7	22.0	23.8	23.7	28.5	22.7	19.4	24.7
All	28.0	30.3	26.7	32.4	27.8	30.5	28.0	27.0	25.9
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No response	6.0	6.5	5.6	3.7	8.3	—	13.1	7.1	4.0

[1] Entries in percentages.

Table 79.—Distributions of post-high school plans—financial (Tallahassee)[1]

Amount of own financial support required after high school graduation	Total group	Race groups		Sex groups		Race/sex subgroups			
		Black	White	Male	Female	Black		White	
						Male	Female	Male	Female
	N=614	N=224	N=390	N=289	N=325	N=94	N=130	N=195	N=195
None	15.5	10.4	18.5	11.7	18.6	4.3	13.8	15.4	21.5
One-fourth	23.9	17.8	27.4	21.5	26.1	13.8	20.8	25.1	29.7
One-half	42.0	42.8	41.5	47.4	37.5	51.0	37.7	45.6	37.4
Three-fourths	16.4	25.4	11.3	17.3	15.7	26.6	24.6	12.8	9.7
All	2.1	3.6	1.3	2.1	2.1	4.3	3.1	1.0	1.5
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No response	9.0	16.1	4.9	11.8	6.5	23.4	10.8	6.2	3.4

[1] Entries in percentages.

Table 80.—Distributions of post-high school plans—financial (Arizona)[1]

Amount of own financial support required after high school graduation	Total group	Race groups			Sex groups		Race/sex subgroups					
							Indian		Chicano		White	
		Indians	Chicano	White	Male	Female	Male	Female	Male	Female	Male	Female
	N=798	N=405	N=202	N=191	N=385	N=413	N=184	N=221	N=110	N=92	N=91	N=100
None	7.4	7.9	6.6	7.0	7.3	7.5	9.5	6.6	9.3	3.3	—	13.1
One-fourth	12.7	11.5	14.1	13.5	11.8	13.5	8.4	14.1	14.8	13.3	15.1	12.1
One-half	27.4	30.0	23.2	26.5	24.7	29.9	30.3	29.7	13.9	34.4	26.7	26.3
Three-fourths	23.5	22.6	24.2	24.9	27.4	19.9	27.5	18.4	26.8	21.1	27.9	22.2
All	29.0	27.9	31.8	28.1	28.8	29.2	24.2	31.1	35.2	27.8	30.2	26.3
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No response	3.1	3.7	2.0	3.1	3.4	2.9	3.3	4.1	1.8	2.2	5.5	1.0

[1] Entries in percentages.

Table 81.—Distributions of post-high school plans—careers (Pittsburgh)

College and career decisions[1]	Total group	Race groups		Sex groups		Race/sex subgroups			
		Black	White	Male	Female	Black		White	
						Male	Female	Male	Female
	N=645	N=304	N=341	N=320	N=325	N=152	N=152	N=168	N=173
Do you plan to attend college after high school?	54.2	60.2	49.0	59.1	49.5	66.4	53.9	52.4	45.7
If you went to college do you think you would be successful?	74.6	78.3	71.3	72.8	76.3	77.0	79.6	69.0	73.4
Have you made a firm career decision?	63.6	65.8	61.6	55.9	71.1	55.3	76.3	56.5	66.5

[1] Entries in percentages answering yes to questions.

Table 82.—Distributions of post-high school plans—careers (Tallahasses)

College and career decisions[1]	Total group	Race groups		Sex groups		Race/sex subgroups			
		Black	White	Male	Female	Black		White	
						Male	Female	Male	Female
	N=614	N=224	N=390	N=289	N=325	N=94	N=130	N=195	N=195
Do you plan to attend college after high school?	75.2	64.2	81.2	75.4	75.1	68.1	61.5	79.0	84.1
If you go to college do you think you'll be successful?	82.7	75.3	86.9	84.4	81.2	79.8	72.3	86.7	87.2
Have you made a firm career decision?	51.9	65.0	44.3	48.1	55.7	63.8	66.2	40.0	48.7

[1] Entries in percentages answering yes to questions.

Table 83.—Distributions of post-high school plans—careers (Arizona)

College and career decisions[1]	Total group	Race groups			Sex groups		Race/sex subgroups					
							Indian		Chicano		White	
		Indians	Chicano	White	Male	Female	Male	Female	Male	Female	Male	Female
	N=798	N=405	N=202	N=191	N=385	N=413	N=184	N=221	N=110	N=92	N=91	N=100
Do you plan to attend college after high school?	65.5	64.2	66.8	61.8	64.1	66.8	59.8	67.9	72.7	59.8	62.6	61.0
If you go to college do you think you'll be successful?	70.5	63.2	75.7	80.6	74.3	67.1	64.1	62.4	81.8	68.5	85.7	76.0
Have you made a firm career decision?	44.1	41.2	48.5	45.5	40.5	47.5	34.2	47.1	52.7	43.5	38.5	52.0

[1] Entries in percentages answering yes to questions.

Table 84.—Background information: Frequency of career counseling (Pittsburgh)

Number of times talked with counselor[1]	Total group	Race groups		Sex groups		Race/sex subgroups			
		Black	White	Male	Female	Black		White	
						Male	Female	Male	Female
	N=645	N=304	N=341	N=320	N=325	N=152	N=152	N=168	N=173
Once	10.0	9.2	11.0	8.1	12.1	.5.4	13.2	10.8	11.3
Twice	27.8	23.2	32.7	27.2	28.4	20.9	25.7	33.8	31.4
Three times	47.4	35.9	59.2	46.7	48.0	33.1	38.9	60.8	57.2
Four times	62.7	49.6	75.7	61.5	64.0	46.6	52.8	76.3	74.8
Five times	68.8	56.8	80.9	68.2	69.6	55.4	58.4	81.0	80.5
More than five times	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Percent no response	7.9	3.9	11.5	8.3	7.6	2.6	5.3	13.5	9.7

[1] Entries are cumulative percentages.

Table 85.—Background information: Frequency of career counseling (Tallahassee)

Number of times talked with counselor[1]	Total group	Race groups		Sex groups		Race/sex subgroups			
		Black	White	Male	Female	Black		White	
						Male	Female	Male	Female
	N=614	N=224	N=390	N=289	N=325	N=94	N=130	N=195	N=195
Once	28.3	21.3	34.5	29.7	27.2	23.9	20.0	34.3	35.1
Twice	49.4	36.8	60.6	50.2	49.0	41.8	34.3	57.2	65.0
Three times	70.8	56.3	84.2	75.6	66.8	65.7	49.5	83.9	85.6
Four times	78.5	67.2	88.6	81.5	76.2	73.2	62.8	87.7	90.8
More than five times	82.5	74.1	89.6	83.7	81.6	74.7	73.3	89.6	90.8
Percent of no response	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1] Entries are cumulative percentages.

Table 86.—Background information: Frequency of career counseling (Arizona)

Number of times talked with counselor[1]	Total group	Race groups			Sex groups		Race/sex subgroups					
							Indian		Chicano		White	
		Indian	Chicano	White	Male	Female	Male	Female	Male	Female	Male	Fem
Once	33.7	38.3	27.0	31.3	35.7	32.0	42.6	35.2	27.9	26.2	32.3	30.
Twice	55.9	62.6	45.0	53.4	57.9	54.2	68.4	58.4	45.9	44.2	52.6	54.2
Three times	74.8	79.5	68.9	71.7	76.5	73.5	86.2	74.6	67.2	70.4	69.5	73.
Four times	82.1	84.4	78.7	80.9	84.6	80.0	92.1	78.9	78.7	78.7	78.0	83.3
More than five times	84.7	86.9	82.0	83.2	88.2	81.8	94.1	81.7	85.3	78.7	81.4	84.
Percent of no response	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.

---

[1] Entries are cumulative percentages.

Table 87.—Exposure to hospitals and health career models (Pittsburgh) [1]

Questions related to exposure to health careers	Total group	Race groups		Sex groups		Race/sex subgroups			
		Black	White	Male	Female	Black		White	
						Male	Female	Male	Fem
	N=645	N=304	N=341	N=320	N=325	N=152	N=152	N=168	N=
Have you ever done volunteer work in a hospital?	11.8	10.9	12.5	4.4	19.1	5.3	16.4	3.6	21.4
Would you do volunteer work in a hospital?	18.4	16.4	20.0	10.9	25.8	11.2	21.8	10.7	29.5
Would you work in a hospital if paid?	64.9	76.3	53.5	58.3	69.8	75.0	77.0	43.8	63.6
Do you personally know any RN's?	65.2	68.5	62.9	58.4	72.0	59.2	77.0	57.7	67.8
Do you personally know any MD's?	49.7	52.0	47.8	51.2	48.3	56.6	47.4	46.4	49.4
Do you personally know any dentists?	38.4	35.8	40.4	36.6	40.3	36.8	34.9	36.3	45.2
Would you like a career as an RN?	14.2	15.9	12.8	3.1	24.9	5.3	26.5	1.2	24.3

[1] Entries in percent of students answering yes to exposure questions.

Table 88.—Exposure to hospitals and health career models (Tallahassee)[1]

Questions related to exposure to health careers	Total group	Race groups		Sex groups		Race/sex subgroups			
		Black	White	Male	Female	Black		White	
						Male	Female	Male	Femal
	N=614	N=224	N=390	N=289	N=325	N=94	N=130	N=195	N=19
Have you ever done volunteer work in a hospital?	8.8	9.0	8.7	3.5	13.5	5.3	11.5	2.6	14.9
Would you do volunteer work in a hospital?	18.9	19.5	18.3	9.3	27.4	13.8	23.8	7.2	29.7
Would you work in a hospital for pay?	58.3	73.2	49.6	52.2	63.7	68.1	77.7	44.6	54.4
Do you personally know any registered nurses	61.4	56.2	63.9	53.6	98.8	44.7	65.4	57.9	69.7
Do you personally know any doctors?	55.0	40.0	62.8	55.4	53.5	41.5	39.2	62.1	63.1
Do you personally know any dentists?	46.2	29.4	56.0	44.6	47.7	24.5	33.1	54.4	57.4
Would you like a career as a registered nurse?	19.4	32.7	12.0	5.9	31.4	12.8	46.9	2.6	21.0

[1] Entries in percent of students answering yes to exposure questions.

Table 89.—Exposure to hospitals and health career models (Arizona)[1]

Questions related to exposure to health careers	Total group	Race groups			Sex groups		Race/sex subgroups					
							Indian		Chicano		White	
		Indians	Chicano	White	Male	Female	Male	Female	Male	Female	Male	Femal
	N=798	N=405	*N=202*	*N=191*	*N=385*	*N=413*	*N=184*	*N=221*	*N=110*	*N=92*	*N=91*	*N=10*
Have you ever done volunteer work in a hospital?	15.2	17.0	10.4	14.7	6.0	23.7	4.8	28.5	7.3	14.1	6.6	22.0
Would you do volunteer work in a hospital?	26.8	30.4	28.2	17.8	16.6	36.3	15.0	43.0	23.6	33.7	11.0	24.0
Would you work in a hospital for pay?	69.3	76.0	74.7	49.2	63.6	74.6	64.2	85.1	74.5	75.0	47.2	51.0
Do you personally know any registered nurses?	42.1	35.8	41.6	61.3	34.8	48.9	22.5	42.1	36.4	47.8	57.1	65.0
Do you personally know any doctors?	29.7	23.2	33.7	39.3	29.3	30.0	23.0	23.1	31.8	35.9	38.5	40.0
Do you personally know any dentists?	19.2	17.8	16.8	24.6	18.2	20.1	17.6	17.6	16.4	17.4	20.9	28.0
Would you like a career as a registered nurse?	26.9	36.5	20.8	13.1	7.8	44.8	8.6	59.7	7.3	37.0	6.6	19.0

[1] Entries in percent of students answering yes to exposure questions.

Table 90.—Reasons for rejecting RN careers (Tallahassee)[1]

Reasons given	Total group	Race groups		Sex groups		Race/sex subgroups			
						Black		White	
		Black	White	Male	Female	Male	Female	Male	Femal
	N=614	N=224	N=390	N=289	N=325	N=94	N=130	N=195	N=19
No interest	20.9	24.8	18.7	25.5	15.4	28.6	20.7	24.4	12.2
Other career choice	13.8	16.5	12.4	12.1	15.9	15.8	17.2	10.7	14.3
Female occupation	20.1	25.6	20.0	40.7	—	49.2	—	37.5	—
Squeamishness	29.3	23.2	30.8	10.0	44.1	3.2	44.8	12.5	51.7
Too much education required	16.4	9.9	18.1	11.7	21.5	3.2	17.2	14.9	21.8
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No response	29.0	47.0	19.2	20.1	36.9	49.2	53.4	13.8	24.6

[1] Entries are percentages.

Table 91.—Reasons for rejecting RN careers (Arizona)[1]

Reason given	Total group	Race groups			Sex groups		Race/sex subgroups					
							Indian		Chicano		White	
		Indians	Chicano	White	Male	Female	Male	Female	Male	Female	Male	Fem
	N=798	N=405	N=202	N=191	N=385	N=413	N=184	N=221	N=110	N=92	N=91	N=1
No interest	16.8	13.1	17.1	22.4	16.4	17.5	13.0	13.2	20.0	11.9	18.9	26.
Other career choice	13.2	11.3	14.5	15.0	12.5	14.1	2.9	24.2	21.3	2.4	21.6	8.
Female occupation	31.0	35.4	31.6	23.8	52.3	1.5	57.2	2.2	48.0	2.4	47.3	—
Squeamishness	22.1	22.7	18.8	23.8	6.3	44.2	8.7	44.0	2.7	47.6	5.4	42.
Too much education required	16.8	17.5	17.9	15.0	12.5	22.8	18.1	16.5	8.0	35.7	6.8	23.
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.
No response	38.2	43.5	42.1	23.0	25.4	50.1	25.0	58.8	31.8	54.3	18.7	27.

[1] Entries are percentages.

VII. THE RELATIONSHIP BETWEEN CURRENT FINDINGS AND PREVIOUS RESEARCH

Over the past decade health researchers have recognized the need for more definitive data than were currently available concerning those factors which lead students to choose or reject careers in nursing. Although considerable information has been obtained about the characteristics of students who choose nursing careers (Knopf, 1972, 1975), less attention has been focused on the attitudes and knowledge of nursing among the general high school student population. Those studies which did address the issue were limited in one or more of the following ways: (1) they sampled only a select student group (i.e., white males, white females; (2) the sample populations were confined to a single region of the country; and/or (3) a limited number of attitudinal variables were measured. This investigation was unique in that the objective was to ascertain and compare a wide range of knowledge and attitudes of nursing held by a large heterogeneous sample of high school students (i.e., blacks, whites, American Indians and Chicanos) drawn from diverse regions of the country. The results reported above confirm several previous findings, support some previously unsupported assumptions, provide new findings not previously reported, and refute some conjectures.

It has been established that males reject nursing as a viable career because they perceive it as a female-related occupation (Vaz, 1968). The results of the present investigation confirm those findings, thus increasing our confidence that the survey instrument employed here was indeed a valid measure of student attitudes and perceptions of nursing.

Although no documentation was found in the literature, it is generally assumed that females reject nursing careers primarily because of their aversion to morbidity. Our findings clearly indicate that this conjecture is valid. It has also been reported (Scheinfeldt and her associates, 1967, 1970) that many minority group students are unprepared academically to pursue nursing education. Our findings generally support this conclusion but also clarify the situation somewhat. According to students' self reports of the courses they have taken, approximately half said they had not taken algebra or chemistry although most had taken biology. This problem was not unique to minority group students, however. Students from all ethnic groups tended to avoid chemistry, and thus it appears that high school students in general, regardless of ethnic background, are not sufficiently prepared to pursue nursing education. Also speculated, but not substantiated in the literature, is the notion that exposure to RN models increases the probability that a student will choose nursing as a career. A finding of this investigation showed that students who indicated they were personally acquainted with an RN rated the RN more positively on all scales than students who were not personally acquainted with an RN. These findings provide strong support for those (Winder, 1971; Scheinfeldt, 1967; Lande, 1966; Taylor and Richter, 1969) who posit a positive link between personal acquaintance with an RN and the desire to become an RN.

Several new and as yet unreported findings emerged from this investigation. Previous research had failed to describe with any clarity the stereotypic images students hold of nursing tasks. Our findings clearly showed that, regardless of race, sex or geographic region, students hold very strong stereotypes of professional nursing duties. Hospital duty nurses were incorrectly perceived as performing relatively low-skill-level health care tasks that are usually delegated to LPNs (e.g., taking temperatures and blood pressures). While students rated the tasks they thought nurses performed positively, our findings indicated that they have more positive perceptions of the tasks nurses said they actually performed. Nowhere in the literature has this finding been previously reported. An additional finding of this investigation, not previously reported, is that students think nursing has many desirable job attributes as indicated by the high job desirability ratings obtained from the semantic differential subscales.

When should recruitment and guidance programs be initiated? Previous studies have indicated that the formation of desire for nursing careers among females occurs in the early teens. Nothing in our study addressed this problem and we are not in a position to either support or refute this finding. It does not necessarily follow that this is the proper time to recruit people into nursing careers, since response to recruitment efforts can be based on entirely different factors than response to spontaneous factors. Programmatically, there is some difficulty in holding onto recruits for 5 or more years if they have been recruited so early. Therefore, maybe the question resolves into how late in their high school careers can students be recruited?

To answer this question we have provided a couple of insights not previously available in the literature. First, we have been able to demonstrate that fewer than 14 percent of all students (with little variation among the race/sex subgroups) feel that they have firm, fixed choices of careers other than nursing. Thus a large amount of students are available as a target group for a recruitment and guidance program even if we further exclude another 17 percent to 21 percent who claimed they were not interested in such a career. Secondly, we have shown that most students could become academically prepared if we could recruit them by the end of their junior year.

Thus, it is felt that, in addition to making a substantial contribution to the literature on minority attitudes toward and knowledge of nursing careers, we have also established a sufficient basis for a formulation of a meaningful recruitment and guidance program.

APPENDIX

OMB CLEARANCE NUMBER 68-S72057
EXPIRES: 06/30/73

SURVEY OF HIGH SCHOOL SENIORS' OPINIONS ON CAREERS

SAMPLE

INTRODUCTION

The National Institutes of Health and the American Institutes for Research are conducting this survey to find out what high school seniors think about various careers. Your cooperation in filling out this survey will be a help to future students who are seeking information about further schooling and specific career fields.

INSTRUCTIONS

We want to get your opinion about some occupations and professions. One occupation appears at the top of each of the following pages. Each page contains a list of word pairs.

Your task is to pick out the word that best represents your personal, true feelings about the job. You will be presented with a series of broken lines with word pairs at either end. Place an X somewhere along the line depending on which word in the pair more closely describes your feelings about the job. For example one of the lines will look like this:

EASY WORK ________ : ________ : ________ : ________ : ________ **HARD WORK**

If you feel that the job you are asked to rate is closely related to one of the words in the pair, place an X on one of the lines as follows:

MECHANIC (Sample Job)

If you think that the mechanic has an *easy* job, place an X at the end of the line nearest "Easy Work".

(easy)
EASY WORK ___X___ : ________ : ________ : ________ : ________ **HARD WORK**

But, if you think that he has a *hard* job, place an X at the end of the line nearest "Hard Work".

(hard)
EASY WORK ________ : ________ : ________ : ________ : ___X___ **HARD WORK**

If you feel that the job is *a little easy*, place an X in the space next to the end space as follows:

(a little easy)
EASY WORK ________ : ___X___ : ________ : ________ : ________ **HARD WORK**

Or, if you feel that the job is *a little hard*, place an X in the space next to the end space on the other side of the scale, as follows:

(a little hard)
EASY WORK ________ : ________ : ________ : ___X___ : ________ **HARD WORK**

And finally, if you consider the occupation to be *neutral* (that both sides of the scale are *equally associated* with the job) or if the word pair seems *completely unrelated* to the job, place an X in the middle space, as follows:

(neither easy nor hard)
EASY WORK ________ : ________ : ___X___ : ________ : ________ **HARD WORK**

Please make your judgments on the basis of what *you* think these jobs are like. There are no *correct* answers. We want your first impressions — your immediate *feelings*. Do not worry or puzzle over individual items, but do not be careless. Be sure you put only *one* X for each pair of words.

SAMPLE

DO NOT TURN BACK TO ANY PREVIOUS PAGE.

GO IMMEDIATELY TO THE NEXT PAGE

HIGH SCHOOL TEACHER

							CARD 1 c.c.
High Pay	5	4	3	2	1	Low Pay	9
Little education needed	5	4	3	2	1	Lot of education needed	10
Personally unrewarding	1	2	3	4	5	Personally rewarding	11
Low status occupation	1	2	3	4	5	High status occupation	12
Typically a woman's occupation	5	4	3	2	1	Typically a man's occupation	13
Boring work	1	2	3	4	5	Enjoyable work	14
Challenging	5	4	3	2	1	Unchallenging	15
Few opportunities for advancement	1	2	3	4	5	Many opportunities for advancement	16
Good working hours	5	4	3	2	1	Poor working hours	17
Chance to supervise self	5	4	3	2	1	No chance to supervise self	18
Easy work	5	4	3	2	1	Hard work	19
I have no desire to enter this profession	1	2	3	4	5	I have a strong desire to enter this profession	20

PLEASE DO NOT MARK IN THIS BOX

SAMPLE

DO NOT TURN BACK TO ANY PREVIOUS PAGE.

GO IMMEDIATELY TO THE NEXT PAGE

REGISTERED NURSE

							cc
High Pay	5	4	3	2	1	Low Pay	21
Little education needed	1	2	3	4	5	Lot of education needed	22
Personally unrewarding	1	2	3	4	5	Personally rewarding	23
Low status occupation	1	2	3	4	5	High status occupation	24
Typically a woman's occupation	5	4	3	2	1	Typically a man's occupation	25
Boring work	1	2	3	4	5	Enjoyable work	26
Challenging	5	4	3	2	1	Unchallenging	27
Few opportunities for advancement	1	2	3	4	5	Many opportunities for advancement	28
Good working hours	5	4	3	2	1	Poor working hours	29
Chance to supervise self	5	4	3	2	1	No chance to supervise self	30
Easy work	5	4	3	2	1	Hard work	31
I have no desire to enter this profession	1	2	3	4	5	I have a strong desire to enter this profession	32

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SAMPLE

DO NOT TURN BACK TO ANY PREVIOUS PAGE.

GO IMMEDIATELY TO THE NEXT PAGE

SECRETARY (With Shorthand)

							c.c.
High Pay	5	4	3	2	1	Low Pay	33
Little education needed	1	2	3	4	5	Lot of education needed	34
Personally unrewarding	1	2	3	4	5	Personally rewarding	35
Low status occupation	1	[illegible]	3	4	5	High status occupation	36
Typically a woman's occupation	5	4	3	2	1	Typically a man's occupation	37
Boring work	1	2	3	4	5	Enjoyable work	38
Challenging	5	4	3	2	1	Unchallenging	39
Few opportunities for advancement	1	2	3	4	5	Many opportunities for advancement	40
Good working hours	5	4	3	2	1	Poor working hours	41
Chance to supervise self	5	4	3	2	1	No chance to supervise self	42
Easy work	5	4	3	2	1	Hard work	43
I have no desire to enter this profession	1	2	3	4	5	I have a strong desire to enter this profession	44

PLEASE DO NOT MARK IN THIS BOX

SAMPLE

DO NOT TURN BACK TO ANY PREVIOUS PAGE.

GO IMMEDIATELY TO THE NEXT PAGE

LAUNDRY WORKER

							c.c.
High Pay	5	4	3	2	1	Low Pay	45
Little education needed	1	2	3	4	5	Lot of education needed	46
Personally unrewarding	1	2	3	4	5	Personally rewarding	47
Low status occupation	1	2	3	4	5	High status occupation	48
Typically a woman's occupation	5	4	3	2	1	Typically a man's occupation	49
Boring work	1	2	3	4	5	Enjoyable work	50
Challenging	5	4	3	2	1	Unchallenging	51
Few opportunities for advancement	1	2	3	4	5	Many opportunities for advancement	52
Good working hours	5	4	3	2	1	Poor working hours	53
Chance to supervise self	5	4	3	2	1	No chance to supervise self	54
Easy work	5	4	3	2	1	Hard work	55
I have no desire to enter this profession	1	2	3	4	5	I have a strong desire to enter this profession	56

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SAMPLE

DO NOT TURN BACK TO ANY PREVIOUS PAGE.

GO IMMEDIATELY TO THE NEXT PAGE

MEDICAL DOCTOR (Intern)

							cc
High Pay	5	4	3	2	1	Low Pay	57
Little education needed	1	2	3	4	5	Lot of education needed	58
Personally unrewarding	1	2	3	4	5	Personally rewarding	59
Low status occupation	1	2	3	4	5	High status occupation	60
Typically a woman's occupation	5	4	3	2	1	Typically a man's occupation	61
Boring work	1	2	3	4	5	Enjoyable work	62
Challenging	5	4	3	2	1	Unchallenging	63
Few opportunities for advancement	1	2	3	4	5	Many opportunities for advancement	64
Good working hours	5	4	3	2	1	Poor working hours	65
Chance to supervise self	5	4	3	2	1	No chance to supervise self	66
Easy work	5	4	3	2	1	Hard work	67
I have no desire to enter this profession	1	2	3	4	5	I have a strong desire to enter this profession	68

PLEASE DO NOT MARK IN THIS BOX

SAMPLE

DO NOT TURN BACK TO ANY PREVIOUS PAGE.

GO IMMEDIATELY TO THE NEXT PAGE

YOUR OWN DESIRED OCCUPATION

____

(Specify)

							C.C. 69-70
High Pay	5	4	3	2	1	Low Pay	71
Little education needed	1	2	3	4	5	Lot of education needed	72
Personally unrewarding	1	2	3	4	5	Personally rewarding	73
Low status occupation	1	2	3	4	5	High status occupation	74
Typically a woman's occupation	5	4	3	2	1	Typically a man's occupation	75
Boring work	1	2	3	4	5	Enjoyable work	76
Challenging	5	4	3	2	1	Unchallenging	77
Few opportunities for advancement	1	2	3	4	5	Many opportunities for advancement	78
Good working hours	5	4	3	2	1	Poor working hours	79
Chance to supervise self	5	4	3	2	1	No chance to supervise self	80
							[illegible]
Easy work	5	4	3	2	1	Hard work	6
I have no desire to enter this profession	1	2	3	4	5	I have a strong desire to enter this profession	7

PLEASE DO NOT MARK IN THIS BOX

SAMPLE

DO NOT TURN BACK TO ANY PREVIOUS PAGE.

GO IMMEDIATELY TO THE NEXT PAGE

INSTRUCTIONS

We would like to know what you think the admission requirements are for several different types of schools. These schools are listed below. Under each type of school there is a list of high school courses. For each school, check (☑) what you think are the Three Most Important Courses required for admission to each. If you think no courses are required for a given school, check the box (☑) beside No Courses Required.

SAMPLE

JUNIOR COLLEGE

Check (☑) the Three Most Important High School Courses

				08
01 ☐ Algebra	04 ☐ Calculus	07 ☐ Foreign Language	10 ☐ Shop Courses	8-9
02 ☐ Biology	05 ☐ Chemistry	08 ☐ Social Studies	11 ☐ Typing	10-11
03 ☐ Business Math	06 ☐ English	09 ☐ Shorthand	12 ☐ No Courses Required	12-13

NURSING SCHOOL

Check (☑) the Three Most Important High School Courses

01 ☐ Algebra	04 ☐ Calculus	07 ☐ Foreign Language	10 ☐ Shop Courses	14-15
02 ☐ Biology	05 ☐ Chemistry	08 ☐ Social Studies	11 ☐ Typing	16-17
03 ☐ Business Math	06 ☐ English	09 ☐ Shorthand	12 ☐ No Courses Required	18-19

VOCATIONAL AND TECHNICAL SCHOOL

Check (☑) the Three Most Important High School Courses

01 ☐ Algebra	04 ☐ Calculus	07 ☐ Foreign Language	10 ☐ Shop Courses	20-21
02 ☐ Biology	05 ☐ Chemistry	08 ☐ Social Studies	11 ☐ Typing	22-23
03 ☐ Business Math	06 ☐ English	09 ☐ Shorthand	12 ☐ No Courses Required	24-25

FOUR-YEAR COLLEGE

Check (☑) the Three Most Important High School Courses

01 ☐ Algebra	04 ☐ Calculus	07 ☐ Foreign Language	10 ☐ Shop Courses	26-27
02 ☐ Biology	05 ☐ Chemistry	08 ☐ Social Studies	11 ☐ Typing	28-29
03 ☐ Business Math	06 ☐ English	09 ☐ Shorthand	12 ☐ No Courses Required	30-31

DO NOT TURN BACK TO ANY PREVIOUS PAGE.

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INSTRUCTIONS

In addition to course requirements, schools sometimes require certain types of tests and other qualifications. For each type of school below, check (☑) what you think are the two most important additional requirements needed for admission to each. If you think that no additional requirements are needed for a given type of school, check the box (☑) marked No Requirements Needed.

JUNIOR COLLEGE

Check (☑) the Two Most Important Additional Requirements

01 ☐ American Nursing Association Examination
02 ☐ College Board Examinations
03 ☐ Graduate in Upper Half of Class
04 ☐ Guidance and Placement Tests
05 ☐ High School Transcripts
06 ☐ National League for Nursing Test
07 ☐ Recommendations from Teachers 32
08 ☐ No Requirements Needed 33

NURSING SCHOOL

Check (☑) the Two Most Important Additional Requirements

01 ☐ American Nursing Association Examination
02 ☐ College Board Examinations
03 ☐ Graduate in Upper Half of Class
04 ☐ Guidance and Placement Tests
05 ☐ High School Transcripts
06 ☐ National League for Nursing Test
07 ☐ Recommendations from Teachers 34
08 ☐ No Requirements Needed 35

VOCATIONAL AND TECHNICAL SCHOOL

Check (☑) the Two Most Important Additional Requirements

01 ☐ American Nursing Association Examination
02 ☐ College Board Examinations
03 ☐ Graduate in Upper Half of Class
04 ☐ Guidance and Placement Tests
05 ☐ High School Transcripts
06 ☐ National League for Nursing Test
07 ☐ Recommendations from Teachers 36
08 ☐ No Requirements Needed 37

FOUR-YEAR COLLEGE

Check (☑) the Two Most Important Additional Requirements

01 ☐ American Nursing Association Examination
02 ☐ College Board Examinations
03 ☐ Graduate in Upper Half of Class
04 ☐ Guidance and Placement Tests
05 ☐ High School Transcripts
06 ☐ National League for Nursing Test
07 ☐ Recommendations from Teachers 38
08 ☐ No Requirements Needed 39

SAMPLE

DO NOT TURN BACK TO ANY PREVIOUS PAGE.

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INSTRUCTIONS

Several occupations are listed below. Beside each, check (☒) the one salary that you think is the closest to what a person just starting out in that field makes. Salaries are given both on a yearly and weekly basis at the top of the page. Use either as your guide. Remember, check only one salary per occupation. Add the occupation you would like to have to the list and check the starting salary you would expect in your occupational choice.

		SALARIES										
		$3,500 Annually or $70.00 Weekly	$4,500 Annually or $85.00 Weekly	$5,500 Annually or $105.00 Weekly	$6,500 Annually or $125.00 Weekly	$7,500 Annually or $145.00 Weekly	$8,500 Annually or $165.00 Weekly	$9,500 Annually or $185.00 Weekly	$10,500 Annually or $200.00 Weekly	$11,500 Annually or $220.00 Weekly	$12,500+ Annually or $245.00+ Weekly	
OCCUPATIONS	Laundry Worker	☐ 01	☐ 02	☐ 03	☐ 04	☐ 05	☐ 06	☐ 07	☐ 08	☐ 09	☐ 10	40-41
	High School Teacher	☐ 01	☐ 02	☐ 03	☐ 04	☐ 05	☐ 06	☐ 07	☐ 08	☐ 09	☐ 10	42-43
	Secretary	☐ 01	☐ 02	☐ 03	☐ 04	☐ 05	☐ 06	☐ 07	☐ 08	☐ 09	☐ 10	44-45
	Registered Nurse	☐ 01	☐ 02	☐ 03	☐ 04	☐ 05	☐ 06	☐ 07	☐ 08	☐ 09	☐ 10	46-47
	Medical Doctor (Intern)	☐ 01	☐ 02	☐ 03	☐ 04	☐ 05	☐ 06	☐ 07	☐ 08	☐ 09	☐ 10	48-49
	I would like to be a (specify)	☐ 01	☐ 02	☐ 03	☐ 04	☐ 05	☐ 06	☐ 07	☐ 08	☐ 09	☐ 10	50-51 52-53

SAMPLE

DO NOT TURN BACK TO ANY PREVIOUS PAGE.

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INSTRUCTIONS

Below is a list of tasks sometimes performed by hospital duty nurses. Check (☑) the *five* (5) tasks you think nurses spend most of their time doing. Remember to check only *five*.

01 ☐ Administer medications
02 ☐ Assist in operating room
03 ☐ Attend staff meetings
04 ☐ Bathe patients
05 ☐ Chart patient's progress records
06 ☐ Collect specimens (urine, blood, etc.)
07 ☐ Comfort patient's family
08 ☐ Conduct research
09 ☐ Discharge patient
10 ☐ Discuss nursing care with doctor
11 ☐ Dress patient
12 ☐ Dress surgical and other wounds
13 ☐ Empty bedpans
14 ☐ Feed patients
15 ☐ Give backrubs
16 ☐ Give enemas
17 ☐ Give shots
18 ☐ Insert catheters
19 ☐ Inspect open wounds
20 ☐ Interpret medical treatments to patients
21 ☐ Irrigate eyes and ears
22 ☐ Keep ward clean
23 ☐ Make beds
24 ☐ Monitor post-surgical drainage tubes
25 ☐ Plan nursing care with family
26 ☐ Position patients in beds, chairs, etc.
27 ☐ Record diagnostic tests
28 ☐ Schedule patients for routine tests
29 ☐ Start and monitor intravenous injections
30 ☐ Supervise duties of janitorial staff
31 ☐ Supervise Nurses' Aides
32 ☐ Take blood pressure
33 ☐ Take patient's medical history
34 ☐ Take temperatures
35 ☐ Teach nursing students and aides
36 ☐ Weigh patient

SAMPLE

DO NOT TURN BACK TO ANY PREVIOUS PAGE.

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INSTRUCTIONS

Below is a list of tasks hospital nurses usually perform in their daily duties. Rate each one as to whether you think it is a *PLEASANT* duty to perform, it is a *NEUTRAL* duty to perform (that is, neither pleasant nor unpleasant), or it is an *UNPLEASANT* duty to perform. If you think the task is a *PLEASANT* one, place a three (3) in the blank beside that task. If you think the task is a *NEUTRAL* one, place a two (2) in the blank beside that task. Finally, if you think the task is *UNPLEASANT*, place a one (1) in the blank beside that task. Be sure to rate each task. Work quickly and carefully.

(3) *PLEASANT* (2) *NEUTRAL* (1) *UNPLEASANT*

64 ____ Administer medications
65 ____ Assist in operating room
66 ____ Attend staff meetings
67 ____ Bathe patient
68 ____ Chart patient's progress records
69 ____ Collect specimens (urine, blood, etc.)
70 ____ Comfort patient's family
71 ____ Conduct research
72 ____ Discharge patient
73 ____ Discuss nursing care with doctor
74 ____ Dress patient
75 ____ Dress surgical and other wounds
76 ____ Empty bedpans
77 ____ Feed patients
78 ____ Give backrubs
79 ____ Give enemas
80 ____ Give Shots
6 ____ Insert catheters

7 ____ Inspect open wounds
8 ____ Interpret medical treatments to patients
9 ____ Irrigate eyes and ears
10 ____ Keep ward clean
11 ____ Make beds
12 ____ Monitor post-surgical drainage tubes
13 ____ Plan nursing care with family
14 ____ Position patients in beds, chairs, etc.
15 ____ Record diagnostic tests
16 ____ Schedule patients for routine tests
17 ____ Start and monitor intravenous injections
18 ____ Supervise duties of janitorial staff
19 ____ Supervise Nurses' Aides
20 ____ Take blood pressure
21 ____ Take patient's medical history
22 ____ Take temperatures
23 ____ Teach nursing students and aides
24 ____ Weigh patient

(3) *PLEASANT* (2) *NEUTRAL* (1) *UNPLEASANT*

SAMPLE

DO NOT TURN BACK TO ANY PREVIOUS PAGE. *GO IMMEDIATELY TO THE NEXT PAGE*

Check (☑) the current high school program that you are in.

cc 25-26

01 ☐ Academic

02 ☐ General (Business)

03 ☐ General (Technical)

04 ☐ Skills (OVT)

Check (☑) all those *courses you have already taken* and passed. Do not include courses you are now taking, or those you *plan* to take, or courses you did not pass.

cc 27 1 ☐ Algebra

28 2 ☐ Biology

29 3 ☐ Calculus

cc 30 4 ☐ Chemistry

31 5 ☐ Foreign Language

32 6 ☐ General Science

cc 33 7 ☐ Geometry

34 8 ☐ Physics

35 9 ☐ Trigonometry

Check (☑) the *courses you are now taking* or plan to complete by the end of your senior year.

cc 36 1 ☐ Algebra

37 2 ☐ Biology

38 3 ☐ Calculus

cc 39 4 ☐ Chemistry

40 5 ☐ Foreign Language

41 6 ☐ General Science

cc 42 7 ☐ Geometry

43 8 ☐ Physics

44 9 ☐ Trigonometry

SAMPLE

DO NOT TURN BACK TO ANY PREVIOUS PAGE.

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BACKGROUND INFORMATION

cc5: 4

1. Date of Birth: / /
Day Month Year

2. Age: What is your present age? 6-7
How many months since your last birthday? 8-9

3. Number of Older Brothers: ______ 10 Number of Younger Brothers: ______ 12
Number of Older Sisters: ______ 11 Number of Younger Sisters: ______ 13

4. Father's Occupation ________________________________ 14-15
Specify
If Unemployed, check here (☐) and indicate former occupation above. 16
If Deceased, check here (☐) and indicate former occupation above. 17
____
____

5. Father's Education (Circle highest grade completed): 18-19
01 02 03 04 05 06 07 08 09 10 11 12
College 1 (13) 2 (14) 3 (15) 4 (16) Other________________________
Specify

6. Mother's Occupation ________________________________ 20-21
Specify
If Unemployed, check here (☐) and indicate former occupation above. 22
If Deceased, check here (☐) and indicate former occupation above. 23
____
____

SAMPLE

7. Mother's Education (Circle highest grade completed): 24-25
01 02 03 04 05 06 07 08 09 10 11 12
College 1 (13) 2 (14) 3 (15) 4 (16) Other________________________
Specify

8. Do you plan to go to college after high school? 1 ☐ Yes 2 ☐ No 26

9. If you went to college do you think you would be successful?
1 ☐ Yes 2 ☐ No 27

10. How many times since last September have you talked to your counselor about careers? 28
0 ☐ Not at All
1 ☐ Once
2 ☐ Two Times
3 ☐ Three Times
4 ☐ Four Times
5 ☐ Five Times
6 ☐ More than Five Times

11. Have you made a firm decision about your future career?
1 ☐ Yes 2 ☐ No 29

12. Have you ever done volunteer work in a hospital? 1 ☐ Yes 2 ☐ No 30

13. Would you be interested in working in a hospital after school or on weekends as a volunteer without pay? 1 ☐ Yes 2 ☐ No 31

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CE 008 123

14. Would you be interested in working part-time in a hospital if you were paid? 32

1 ☐ Yes 2 ☐ No

15. Do you personally know any Registered Nurses? 1 ☐ Yes 2 ☐ No 33
Doctors? 1 ☐ Yes 2 ☐ No 34
Dentists? 1 ☐ Yes 2 ☐ No 35

16. Do you think you would like a career as a Registered Nurse? 36

1 ☐ Yes 2 ☐ No

If not, please briefly indicate why ______________________________

______________________________ 37-38

____

17. How important is it for you to start working and earning money after you finish high school?
Check the appropriate box (☑) below. 39

1 ☐ Critical that I start working and earning money immediately after high school
2 ☐ Very important but not critical
3 ☐ Neither important nor unimportant
4 ☐ Of little importance
5 ☐ Not at all critical that I start working immediately after finishing high school

SAMPLE

18. After graduation how much of your support will you be responsible for? 40-41

99 ☐ All 75 ☐ 75% 50 ☐ 50% 25 ☐ 25% 01 ☐ None

[illegible]

19. Please indicate your ethnic background: 6

1 ☐ Afro-American (Black) 4 ☐ Chicano (Mexican American)
2 ☐ American Indian 5 ☐ Oriental
3 ☐ Caucasian (Angloid) 6 ☐ Other

20. Please indicate your sex: 7-8

10 ☐ Male 20 ☐ Female

PLEASE DO NOT WRITE IN THIS SPACE – FOR INTERNAL USE ONLY

School ____________

ID ___ ___ ___

CD1 ____________ 5

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